REMARKS

Applicant submits this Amendment in response to the Office Action mailed on July 31, 2008. Applicant submits herewith a Request for Continued Examination.

Claim 1 has been amended by amending the preamble to call for a method for reducing hyperreactivity in vascular muscle cells and further by removing the limitation of administration to a patient and replacing this limitation with exposing vascular muscle cells. Support for the amendments to claim 1 is found throughout the specification, including the data presented in Figures 1, 2, and 4-7, and in the Examples. Claims 2, 3, 9, 11, 13, 15, and 16 have been amended to reflect the amendment to claim 1, from which these claims depend.

Rejections of the Claims

I. 35 U.S.C. §112, first paragraph, written description requirement

The Examiner has rejected claims 1-16 under 35 U.S.C. §112, first paragraph, for failure to comply with the written description. The Examiner bases this rejection on the ground that, as stated by the Examiner, "The specification does not provide support that all the estrogen beta receptor agonist that has a higher relative selectivity than that of genistein for estrogen receptor beta compared to estrogen receptor alpha is useful in a method of reducing the incidence or severity of vascular hyperreactivity in a patient." Applicant traverses the rejection of these claims on this ground.

Prior to the present application, it was known that estradiol is effective in reducing the incidence or severity of vascular hyperreactivity. See, for example, Levine, U.S. Patent No. 5,985,861. Estradiol is a potent estrogen and is an agonist of both estrogen receptor α ("ER-

alpha") and estrogen receptor β ("ER-beta"). Although estradiol binds to both the α and β estrogen receptors, it has a higher selectivity for the α receptor than it does for the β receptor. The tissue distributions of ER-alpha and ER-beta receptors differ. For example, ER-alpha receptors are present at much higher levels in the uterus than are ER-beta receptors. On the other hand, ER-beta receptors are present at higher levels in the adrenal glands and in the spleen than are ER-alpha receptors.

The present invention is based upon the discovery that activating the ER-beta receptor alone is sufficient to reduce vascular muscle hyperreactivity. Thus, ER-alpha activity is not necessary.

In the long paragraph that encompasses all of page 5 of the specification, the specification discloses that:

> It has been surprisingly discovered that estrogen receptor beta agonists inhibit the development of vascular hyperreactivity, e.g., coronary vasospasm, in individuals, including those individuals lacking a significant source of endogenous estrogen, such as post-menopausal women. According to one embodiment of the method of the invention, the incidence or severity of vascular hyperreactivity, including coronary arterial vasospasms, is reduced by administering to a patient in need thereof an effective amount of an estrogen receptor beta agonist, thereby inhibiting the severe long duration vasoconstrictions that define hyperreactivity, including the formation of coronary arterial vasospasms and thereby reducing the incidence and/or severity of myocardial ischemia. See page 5, lines 1-9.

Following this disclosure, the specification continues on page 5 to state that the invention is illustrated by a particular preferred estrogen receptor agonist, 5α-androstane-3β,17β-diol, also referred to as "3βAdiol." See page 5, lines 9-11. The specification further discloses that 3βAdiol is merely illustrative and that the invention pertains not only to 3βAdiol but to

derivatives of 3βAdiol and to any known or to be discovered estrogen beta receptor agonists. See page 5, lines 11-19. Finally, the specification discloses that the invention pertains to:

> estrogen receptor beta agonists that are selective over estrogen receptor alpha. Examples of estrogen receptor beta agonists that are suitable for the invention include epi-estriol (the α isomer of estriol), genistein, and diarylpropionitrile (DPN). See page 5, lines 19-22.

As filed, claim 1 of the application broadly called for administering to a patient an effective amount of an estrogen beta receptor agonist.

In previous Office Actions, the Examiner cited several references that pertained to genistein, an estrogenic compound that is selective for the ER-beta receptor over the ER-alpha receptor. Genistein, however, is only slightly selective for ER-beta receptor than for the ER-alpha receptor. In response, even though, as Applicant argued, the cited references are not pertinent to the present invention, Applicant amended the claims to limit the ER-beta receptor agonists covered by the claims to be only those that are more selective for ER-beta over ER-alpha than is genistein.

Applicant submits that this amendment to the claims is fully supported in the specification and does not fail to comply with the written description requirement of 35 U.S.C. §112, first paragraph. In support of Applicant's assertion that the amendment of the claims to call for estrogen beta receptor agonists that have a higher relative selectivity than that of genistein for estrogen receptor beta compared to estrogen receptor alpha, Applicant submits herewith the following pertinent cases.

1. *Vas-Cath Inc. v. Mahurkar*, 19 U.S.P.Q.2d 1111 (Fed. Cir. 1991). This Federal Circuit Court of Appeals case describes the history and purpose of the written description

requirement. 19 U.S.P.Q.2d at 1116. In reversing the decision of the lower District Court, the Federal Circuit stated:

> . . . the Court of Appeals for the Federal Circuit has frequently addressed the "written description" requirement of §112. A fairly uniform standard for determining compliance with the "written description" requirement has been maintained throughout: "Although [the applicant] does not have to describe exactly the subject matter claimed, . . . the description must clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (citation omitted). "[T]he test for sufficiency of support in a parent application is whether the disclosure of the application relied upon 'reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.' "

2. *Nelson v. Bowler*, 1 U.S.P.Q.2d 2076 (Bd. Pat. Appeals and Interferences 1986). In the context of an interference, the Board considered whether the Nelson disclosure satisfied the written description requirement. The Board stated that:

> We disagree with Bowler's contention that the Nelson disclosure does not meet the written description requirement of 35 USC 112 for the two compounds at issue. It is not necessary that the claimed subject matter be described in *ipsis verbis* to satisfy the written description requirement of 35 USC 112. . . . The issue is whether the Nelson specification clearly conveys clearly to those skilled in the art that Nelson invented the compounds at issue.

3. *In re Johnson and Farnham*, 194 U.S.P.Q. 187 (C.C.P.A. 1977). The Court of Customs and Patent Appeals, the predecessor court to the Court of Appeals for the Federal Circuit, addressed the issue of an applicant who amends his claims to carve out a "limited genus" from a broader class that was disclosed in the specification, where the limited genus is not specifically disclosed in the specification. This issue is similar to the issue presented by the present application. The court, in reversing the holding of the Board of Patent Appeals, stated at 194 U.S.P.Q. 195-196:

While the board found that "no antecedent basis exists in the parent case" for the "limited genus" in claim 1, we see more than ample basis for claims of such scope. The 1963 disclosure is clearly directed to polymers of the type claimed. Fifty specific choices are mentioned for the E precursor compound, a broad class is identified as embracing suitable choices for the E' precursor compound, and twenty-six "examples" are disclosed which detail fifteen species of polyarylene polyethers. Only fourteen of those species and twenty-three of the "examples" are within the scope of the claims now on appeal. *Two of the many choices for E and E' precursor compounds are deleted from the protection sought, because appellant is claiming less than the full scope of his disclosure.* (Italics added for emphasis.) But, as we said in *In re Wertheim*, 541 F.2d 257, 263, 191, U.S.P.Q. 90, 97 (CCPA 1976):

Inventions are constantly made which turn out not to be patentable, and applicants frequently discover during the course of prosecution that only a part of what they invented and originally claimed is patentable.

It is for the inventor to decide what bounds of protection he will seek. *In re Saunders* (citation omitted). To deny appellants the benefit of their grandparent application in this case would, as this court said in *Saunders*:

* * * let form triumph over substance, substantially eliminating the right of an applicant to retreat to an otherwise patentable species merely because he erroneously thought that he was first with the genus when he filed.

The court further stated:

The notion that one who fully discloses, and teaches those skilled in the art how to make and use, a genus and numerous species therewithin, has somehow failed to disclose, and teach those skilled in the art how to make and use, that genus minus two of those species, and has thus failed to satisfy the requirements of §112 first paragraph, appears to result from a hypertechnical application of legalistic prose relating to that provision of the statute. *All that happened here is that appellants narrowed their claims to avoid having them read on a lost interference count.* (emphasis added)

The court summarized as follows:

Here, as we hold on the facts of this case, the "written description" in the 1963 specification supported the claims in the absence of the limitation, and that specification, having described the whole, necessarily described the part remaining.

4. *In re Herschler*, 200 U.S.P.Q. 711 (C.C.P.A. 1979). The court addressed the issue of the written description requirement pertaining to a claim that recites a subgenus that is not disclosed literally in the specification. The application disclosed a single species within the terms of the disputed claim. The court stated, at 200 U.S.P.Q. 717:

> The function of the description requirement is to ensure that the inventor had possession of, as of the filing date of the application relied upon, the specific subject matter later claimed by him; how the specification accomplishes this is not material. (citation omitted) The claimed subject matter need not be described in haec verba to satisfy the description requirement. (citation omitted) It is not necessary that the application describe the claim limitations exactly, but only so clearly that one having ordinary skill in the pertinent art would recognize from the disclosure that appellants invented processes including those limitations. (citation omitted).
> The question is simple: does the array of information supplied by appellant in the great-grandfather application teach one having ordinary skill in the art that one of the class of steroids will operate in the claimed process. We conclude that it does.
>
> . . . The written description of a class of compounds must provide a measure of predictability for the utility described for that class. That is say: would the worker of ordinary skill in this art consider "steroidal agents" to be operative when considering the great-grandparent's disclosure" It is incumbent, in the first instance, for the PTO to give reasons why he would not.

The court further stated, at 200 U.S.P.Q.2d at 718:

> In sum, claims drawn to the use of known chemical compounds in a manner auxiliary to the invention must have a corresponding written description only so specific as to lead one having ordinary skill in the art to that class of compounds.

5. *Ex parte Sorenson*, 3 U.S.P.Q.2d 1462 (Bd. Pat. Appeals and Interferences 1987). In *Ex parte Sorenson*, the Examiner had rejected claims drawn to "binuclear copper complexes of carboxylic acid" and "a binuclear copper complex of an aliphatic carboxylic acid or binuclear copper complex of an aryl carboxylic acid." The rejection was based on the lack of disclosure for these specific features although the specification recited the broader features of "an organic

compound of copper," "copper complexes of carboxylic acids," the "copper complex of an aliphatic carboxylic acid", and the "copper complex of an aryl carboxylic acid." The Examiner asserted that, although the specification supported the broad features, it did not support the above narrower features.

The Board, however, did not agree with the Examiner and reversed the rejection. The Board set forth the test that the Examiner should have followed:

> The test is whether the originally filed specification disclosure reasonably conveys to a person having ordinary skill that applicant had possession of the subject matter later claimed. . . . Moreover, the examiner has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in appellant's specification disclosure a description of the invention defined by the claims. 3 U.S.P.Q.2d at 1463.

The Board stated that the Examiner had not met this initial burden to present evidence why a person of ordinary skill in the art would not recognize in appellant's specification a description defined by the claims. The Board stated that the Examiner had merely made a bare assertion that the claims were not supported by the specification.

The Board analyzed the specification as follows and found that there was sufficient support for the narrowing of the claims, even though the narrowing language was not present in the specification as filed.

> [T]he specification disclosure as filed present five working examples of binuclear copper complexes of carboxylic acids. Four of those are representative of a binuclear copper complex of an aryl carboxylic acid and one is representative of a binuclear copper complex of an aliphatic carboxylic acid. . . . Given those working examples together with the broader disclosure of copper complexes of carboxylic acids, both aliphatic and aromatic, we have no doubt that appellant's disclosure reasonably conveys to the skilled artisan that appellant had possession of the subject matter now claimed. 3 U.S.P.Q.2d at 1464.

There are a multitude of other cases, decided by the Federal courts and by the Board of Patent Appeals, that are similar to those cited above. These cases include, for example, *All Dental Prodx LLC v. Advantage Dental Products Inc.*, 64 U.S.P.Q.2d 1945 (Fed. Cir. 2002); *In re Wright*, 9 U.S.P.Q.2d 1649 (Fed. Cir. 1989); and *Ex parte Parks*, 30 U.S.P.Q.2d 1234 (Bd. Pat. Appeals and Interferences 1993).

As taught by all of the above cases, the standard to be followed when deciding if an amended claim is supported by the specification is whether one of skill in the art would reasonably understand that the applicant had possession of the invention at the time the application was filed. The amended claim language does not have to be literally stated in the specification so long as the application conveys in some way that the amended claim language is part of the application as filed. The Examiner has the initial burden of providing some evidence to show why one skilled in the art would not understand that the amended claim language would not be understood by one skilled in the art to be included within the application. It is understood that an inventor may carve out and claim only a portion of what is disclosed, such as to define the invention in order to avoid the prior art (see *In re Johnson and Farnham*).[1]

The present case is very similar to that of *In re Johnson and Farnham*. The present application discloses that any estrogen beta receptor agonist that is selective over estrogen receptor alpha is suitable for the invention. Specific examples disclosed include epi-estriol, genistein, and diarylpropionitrile. Similarly to what the court stated in *In re Johnson and*

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[1] It is noted that Applicants' submission of the standard and methodology by which the Examiner is to examine an amended claim for compliance with the written description requirement is consistent with the Guidelines for Examination of Patent Applications Under the 35 U.S.C. 112, 1, 'Written Description' Requirement issued by the United States Patent Office effective as of January 5, 2001. See, especially, Section II.A.

Farnham, the present Applicant has carved out a limited species after the genus encompassing that species was held by the Examiner to be not patentable. To deny appellants the ability to do so would:

> let form triumph over substance, substantially eliminating the right of an applicant to retreat to an otherwise patentable species merely because he erroneously thought that he was first with the genus when he filed. *In re Johnson and Farnham*, at 194 U.S.P.Q. 195-196.

In the present case, Applicant began by claiming all estrogen beta receptor agonists and, in the face of continued rejections of such broad claims in view of the prior art, has retreated to an otherwise patentable species. Applicant respectfully submits that Applicant is within his rights to do so and that such an amendment fully complies with the written description requirement of 35 U.S.C. §112, first paragraph.

It is submitted that the rejection of claims 1-16 as failing to comply with the written description requirement is improper in view of the fact that one of skill in the art would reasonably understand that the applicant had possession of the invention called for in these claims at the time the application was filed. It is respectfully submitted that there is ample support in the present application for the amendment. Applicant has disclosed a broad genus, that being all compounds that are selective for ER-beta over ER-alpha and has since narrowed the claims to a narrower genus within the broad genus. Further, Applicant has provided several examples of compounds that fall within the scope of the narrower genus presently claimed. The holdings of a great many Federal Circuit court and Board of Appeals decisions support Applicant's assertion that the amendment to the claims does not violate the written description requirement.

Accordingly, the Examiner is respectfully requested to reconsider and to withdraw the rejection of these claims for failure to comply with the written description requirement.

II. 35 U.S.C. §112, first paragraph, enablement requirement

The Examiner has rejected claims 1-16 under 35 U.S.C. §112, first paragraph, for lack of enablement of the claims to the full scope claimed. The Examiner bases this rejection on the contention that, although the specification is enabled for estriol in the claimed method, the specification does not enable the use of a selective estrogen beta receptor agonist that has a higher relative selectivity for estrogen beta receptor compared to estrogen alpha receptor than does genistein. Applicant traverses the rejection of the claims on this ground.

Applicant respectfully submits that the Examiner has mis-characterized the invention and the predictability of the art.

Prior to the present application, it was well known in the art that estradiol was known to have favorable effects in reducing the hyperreactivity of vascular muscle cells. It was also well known in the art that estradiol has an agonist effect on two major receptors, termed respectively the estrogen receptor α (ER-α) and the estrogen receptor β (ER-β).

It is well known in the art that, when a chemical compound, referred to as a ligand, binds to a receptor, a physiological response is triggered if the chemical compound is an agonist for the receptor. If the chemical compound is an antagonist, the binding of the chemical compound to the receptor does not trigger the physiological response and may even prevent the physiological response from being triggered. If a particular agonist ligand has high affinity for a

particular receptor, then a lower concentration of the ligand is required in order to trigger the physiological response than is required of a ligand that has low affinity for a particular receptor.

Meyers, J. Med. Chem., 44:4230-4251 (2001), cited by the Examiner in the Office Action of August 9, 2007, discloses in Table 4 on page 4241 the relative affinity (selectivity) of several agonists for ER-α and ER-β. The first ligand in Table 4, estradiol, has a relative affinity (selectivity) for ER-β over ER-α of 0.46. That is, estradiol is almost two times more selective for ER-α than it is for ER-β.

Table 4 also discloses the selectivity of other ER-β ligands, including genistein and DPN (diarylpropionitrile). As disclosed in Table 4, genistein has a selectivity for ER-β over ER-α of 3. That is, genistein is more than 6 times (3 / 0.46) more selective for ER-β over ER-α than is estradiol.

As disclosed in Table 4, DPN has a selectivity for ER-β over ER-α of 78. Thus, the selectivity of DPN for ER-β over ER-α is 26 times (78 / 3) more selective for ER-β over ER-α than is genistein and is 169 times more selective for ER-β over ER-α than is estradiol. It is clear that, with a selectivity for ER-β over ER-α of 78, the agonist activity of DPN is virtually exclusively directed to ER-β and is almost not at all directed to ER-α.

The present specification provides data obtained utilizing several ER-β agonists that have a selectivity for ER-β over ER-α which is higher than that of genistein. Epiestriol has a selectivity for ER-β over ER-α of 30. Therefore, epiestriol is 10 times more selective for ER-β than for ER-α compared to genistein and is 65 times more selective for ER-β over ER-α than is estradiol. 3βAdiol, also referred to as androstane or 5α-androstane-3β,17β-diol, has a selectivity for ER-β over ER-α of 36, which is 10 times more selective for ER-β than for ER-α compared to

genistein and is 78 times more selective for ER-β over ER-α than is estradiol. Estriol has a selectivity for ER-β over ER-α of 5. Therefore, estriol is 1.6 times more selective for ER-β than for ER-α compared to genistein and is 11 times more selective for ER-β over ER-α than is estradiol.

The specification provides data in the Examples that shows the effectiveness of epiestriol, DPN, 3βAdiol, and estriol in protecting against vasospasms in an art-recognized model of the human vascular system, rhesus monkeys, and in an *in vitro* model of vascular muscle cells utilizing vascular muscle cells obtained from the rhesus monkey animal model. This *in vitro* model has been shown to be predictive of the effect of a compound to reduce hyperreactivity in vascular muscle cells. See Hermsmeyer, U.S. Patent No. 6,056,972, cited by the Examiner in the Office Action of August 9, 2007.

One of skill in the art would understand from the data presented in the specification that any ER-α agonist activity of a chemical compound is not necessary in order to obtain the results called for in the present claim. The data clearly shows that the ER-β affinity of a chemical compound alone is sufficient to reduce hyperreactivity in vascular muscle cells. Epiestriol, DPN, and 3βAdiol have many times the selectivity for ER-β over ER-α than does genistein, and estriol has almost twice the selectivity for ER-β over ER-α than does genistein.

One skilled in the art would understand that the identity of a chemical compound is not the key issue. What is the key issue is whether a chemical compound is an agonist of the ER-β receptor and, for the present application, whether the chemical compound is an agonist of the ER-β receptor with a relative affinity for the ER-β receptor over the ER-α receptor greater than that of genistein. One skilled in the art would understand from the data presented in the

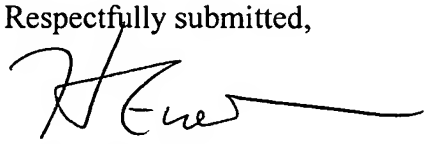
present specification that any chemical compound that has ER-β activity, whether or not it also has ER-α activity, would be suitable for the method of the present invention.

Applicant has provided sufficient data to establish that estrogen beta receptor agonists that are selective for ER-β over ER-α to an extent that the ER-α component is trivial are suitable for use in the present invention. Further, the data provided that estrogen beta receptor agonists that are more selective for ER-β over ER-α than is genistein are suitable for use in the present invention. Accordingly, Applicant submits that the rejection of claims 1-16 under 35 U.S.C. §112, first paragraph, for lack of enablement of the claims to the full scope claimed has been overcome and the Examiner is respectfully requested to withdraw the rejection of these claims on this ground.

CONCLUSION

Applicant submits that the claims, as amended herein, are in condition for allowance and requests an early notice to that effect. Applicant submits a Request for Continued Examination, with applicable fees, with this Amendment.

Respectfully submitted,



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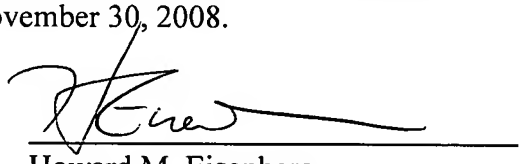
Attachments: Request for Continued Examination with required fees
Vas-Cath Inc. v. Mahurkar, 19 U.S.P.Q.2d 1111 (Fed. Cir. 1991)
Nelson v. Bowler, 1 U.S.P.Q.2d 2076 (Bd. Pat. Appeals and Interferences 1986)
In re Johnson and Farnham, 194 U.S.P.Q. 187 (C.C.P.A. 1977)
In re Herschler, 200 U.S.P.Q. 711 (C.C.P.A. 1979)
Ex parte Sorenson, 3 U.S.P.Q.2d 1462 (Bd. Pat. Appeals and Interferences 1987)

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on November 30, 2008.

Dated: 11/30/08



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scope of injunctive relief to the ameliorative steps that it announced at the hearing."

C. *Irreparable Harm*

To obtain preliminary injunctive relief the movant must establish a probability of irreparable harm. In the context of trademark cases, such harm is ordinarily deemed to be established if the movant demonstrates a likelihood of customer confusion as to source or sponsorship. *See, e.g., Home Box Office, Inc. v. Showtime/The Movie Channel, Inc.*, 832 F.2d at 1314; *Standard & Poor's Corp. v. Commodity Exchange, Inc.*, 683 F.2d 704, 708 [216 USPQ 841] (2d Cir. 1982).

For reasons already noted, PAF has offered sufficient evidence of the likelihood of such confusion to establish a probability of success on the merits of this issue at trial. That showing equally satisfies its burden of showing irreparable harm. Moreover, apart from evidence of such likely confusion, PAF introduced evidence suggesting that it may well have already lost a major customer on the West Coast as a result of the similarity of the LTS-619 to the Dove, which is also being marketed in that locale. (Tr. 176-77.) Injury of this type is not likely to be compensable by money damages, and accordingly preliminary injunctive relief is warranted."

D. *The Nature of the Relief to be Awarded*

The scope of relief to be awarded in a case of this type is left, in large measure, to the broad discretion of the trial court. *See, e.g., Soltex Polymer Corp. v. Fortex Indus., Inc.*, 832 F.2d at 1329; *Springs Mills, Inc. v. Ultracashmere House, Ltd.*, 724 F.2d 352, 355 [221 USPQ 577] (2d Cir. 1983). For reasons mentioned, any injunction should be limited to the scope of the harm that is proven, but should be adequate to remedy the injury caused by any proven infringement.

On the current motion, the proven harm appears to be a product of both the striking resemblance of the LTS-619 to the Dove and the way in which both lamps are advertised and marketed. Although as a general matter it is preferable to minimize the degree of injunctive restraint imposed on LTS especially in view of the patented status of its lamp, the current record is inadequate to justify granting relief that falls short of an injunction *pendente lite* against importation or sale of the LTS-619 in its current form. For reasons already noted, LTS has not affirmatively shown that any narrower remedies would suffice to eliminate the serious prospect of significant customer confusion about both the source and the sponsorship of the LTS-619.

Accordingly, LTS, its officers, agents and employees, and all others acting in concert with LTS or its officers, agents and employees, will be enjoined, during the pendency of this lawsuit, from importing or causing to be imported into the United States, and from distributing or selling or promoting, or causing to be distributed, sold or promoted in the United States, the lamps identified by LTS in this proceeding as the LTS-614 and the LTS-619.

There remains the question of whether the injunction should be sufficiently broad to encompass other variations of the same lamp design, which might also infringe the trade dress of the Dove. In view of the prior history of LTS infringement of the Dove trade dress, this prospect cannot be excluded and should not be ignored in defining the scope of the injunction. Nonetheless, a broadly worded prohibition against any other future infringements of the trade dress of the Dove, *e.g., Jolly Time Indus., Inc. v. Elegra Inc.*, 690 F.Supp. at 233, seems inappropriate. First, it would be of questionable utility in defining for LTS the parameters of prohibited conduct. Second, it might have the undesired effect of deterring LTS from continuing to design aesthetically pleasing lamps that may bear some resemblance to products already in the market. To minimize the likelihood of such an adverse effect, the court will instead direct that LTS, its officers, agents and employees and all others acting in concert with LTS and its officers, agents and employees be further enjoined, during the pendency of this lawsuit, from importing or causing to be imported into the United States, and from distributing or selling or promoting, or causing to be distributed, sold or promoted in the United States, any table desk lamp incorporating any of the design features of the LTS-614, the LTS-619 or the Dove, without giving PAF, by its counsel, two weeks written notice before any importation, distribution, sale or promotion, with such notice to include a clear photograph of the new lamp as seen in profile, from the front and from the rear.

PAF is directed to settle an appropriate order within three (3) days embodying the foregoing terms. LTS is to serve and file with the Court within the same time period, one or more affidavits addressing the appropriate amount, if any, of a bond.

SO ORDERED.

" This conclusion does not bar LTS from seeking to make such a showing in the future if it seeks relief from any injunction. *See, e.g., HBO, Inc. v. Showtime/The Movie Channel, Inc.*, 832 F.2d at 1316.

" Although not required in light of my previous conclusions about the likelihood of success of PAF's Lanham Act Claim, I also find that the record adequately demonstrates that PAF meets the alternative test for injunctive relief, in that the harm it faces if denied relief substantially outweighs the likely harm to LTS if an injunction is entered. The Dove has been shown to be central to PAF's recent commercial success, *see supra* at 4 n.1, and denial of an injunction could undermine that success. In contrast, there is no evidence that the temporary suspension of importation of the LTS-619 would impose any significant hardship on LTS, which appears to sell a wide variety of lamps, as well as auto parts.

Court of Appeals, Federal Circuit

Vas-Cath Inc. v. Mahurkar

Nos. 90-1528, 91-1032

Decided June 7, 1991

JUDICIAL PRACTICE AND PROCEDURE

1. Procedure — Summary judgment — In general (§410.3301)

Procedure — Judicial review — Standard of review — In general (§410.4607.01)

Court of appeals, in reviewing grant of summary judgment, is not bound by federal district court's holding that no material facts are in dispute, and must make independent determination as to whether standards for summary judgment have been met.

PATENTS

2. Patentability/Validity — Specification — Written description (§115.1103)

"Written description" of invention required by first paragraph of 35 USC 112 is separate and distinct from that paragraph's requirement of enabling disclosure, since description must do more than merely provide explanation of how to "make and use" invention; applicant must also convey, with reasonable clarity to those skilled in art, that applicant, as of filing date sought, was in possession of invention, with invention being, for purposes of "written description" inquiry, whatever is presently claimed.

3. Practice and procedure in Patent and Trademark Office — Prosecution — Drawings (§110.0920)

Patentability/Validity — Specification — Written description (§115.1103)

Drawings alone may, under proper circumstances, provide "written description" of invention required by 35 USC 112, and whether drawings are from design application or utility application is not determinative.

4. Patentability/Validity — Specification — Written description (§115.1103)

Federal district court erred by requiring drawings from design patent application to "describe what is novel or important" about invention in order to satisfy "written description" requirement of 35 USC 112 for later-filed utility patent on double lumen catheter having combination of features, since there is no legally cognizable or protected "essential" element, "gist" or "heart" of invention in combination patent; rather, invention is defined by claims under consideration.

5. Patentability/Validity — Specification — Written description (§115.1103)

Federal district court erred by considering patents granted to applicant after utility patents containing claims in question in determining whether drawings from design application satisfy "written description" requirement of 35 USC 112 for those claims, since later patenting of inventions having different specifications is irrelevant to determination of Section 112 sufficiency of application in question, which must be judged as of its filing date.

6. Patentability/Validity — Specification — Written description (§115.1103)

Federal district court erred by imposing legal standard that essentially required drawings from design application for double lumen catheter to necessarily exclude all diameters of lumens, other than those within range specified by subsequently-filed utility claims, in order to satisfy "written description" requirement of 35 USC 112 for those claims, since proper test is whether drawings conveyed, with reasonable clarity to those of ordinary skill in art, that applicant had in fact invented catheter having return lumen of diameter within claimed range; defendant's submission of expert's declaration stating that person of ordinary skill viewing drawings would be able to derive claimed range therefrom, and plaintiff's failure to refute such declaration, therefore gave rise to genuine issue of material fact inappropriate for summary disposition.

Particular patents — General and mechanical — Catheters

4,568,329, Mahurkar, double lumen catheter, summary judgment of invalidity reversed.

4,692,141, Mahurkar, double lumen catheter, summary judgment of invalidity reversed.

Appeal from the U.S. District Court for the Northern District of Illinois, Easterbrook, J.; 17 USPQ2d 1353.

Action by Vas-Cath Inc. and Gambro Inc. against Sakharam D. Mahurkar and Quinton Instruments Co., for declaratory judgment of patent non-infringement, in which defendants counterclaim for patent infringement. From entry of summary judgment holding patents invalid, defendants appeal. Reversed and remanded.

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Raymond P. Niro, of Niro, Scavone, Haller & Niro, Chicago, Ill. (Joseph N. Hosteny and John C. Janka, with him on brief; Michael P. Mazza, of counsel); Michael J. Sweedler, of Darby & Darby, New York, N.Y., for defendants-appellants.

Before Rich, Michel, and Plager, circuit judges.

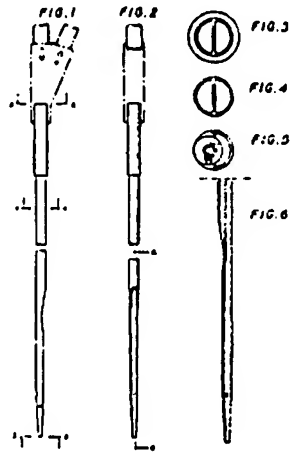
Rich, J.

Sakharam D. Mahurkar and Quinton Instruments Company (collectively Mahurkar) appeal from the September 12, 1990 partial final judgment[1] of the United States District Court for the Northern District of Illinois, Easterbrook, J., sitting by designation, in Case No. 88 C 4997. Granting partial summary judgment to Vas-Cath Incorporated and its licensee Gambro, Inc. (collectively Vas-Cath), the district court declared Mahurkar's two United States utility patents Nos. 4,568,329 ('329 patent) and 4,692,141 ('141 patent), titled "Double Lumen Catheter," invalid as anticipated under 35 USC 102(b). In reaching its decision, reported at 745 F.Supp. 517, 17 USPQ2d 1353, the district court concluded that none of the twenty-one claims of the two utility patents was entitled, under 35 USC 120, to the benefit of the filing date of Mahurkar's earlier-filed United States design patent application Serial No. 356,081 ('081 design application), which comprised the same drawings as the utility patents, because the design application did not provide a "written description of the invention" as required by 35 USC 112, first paragraph. We *reverse* the grant of summary judgment with respect to all claims.

[1] The district court directed entry of final judgment as to the issue of patent invalidity pursuant to Fed.R.Civ.P. 54(b).

BACKGROUND

Sakharam Mahurkar filed the '081 design application, also titled "Double Lumen Catheter," on March 8, 1982. The application was abandoned on November 30, 1984. Figures 1-6 of the '081 design application are reproduced at right [below].



As shown, Mahurkar's catheter comprises a pair of tubes (lumens) designed to allow blood to be removed from an artery, processed in an apparatus that removes impurities, and returned close to the place of removal. Prior art catheters utilized concentric circular lumens, while Mahurkar's employs joined semi-circular tubes that come to a single tapered tip. Advantageously, the puncture area of Mahurkar's semicircular catheter is 42% less than that of a coaxial catheter carrying the same quantity of blood, and its conical tip yields low rates of injury to the blood. The prior art coaxial catheters are now obsolete; Mahurkar's catheters appear to represent more than half of the world's sales. 745 F.Supp. at 520, 17 USPQ2d at 1353-54.

After filing the '081 design application, Mahurkar also filed a Canadian Industrial Design application comprising the same drawings plus additional textual description. On August 9, 1982, Canadian Industrial Design 50,089 (Canadian '089) issued on that application.

More than one year later, on October 1, 1984, Mahurkar filed the first of two utility patent applications that would give rise to the patents now on appeal. Notably, both utility applications included the same drawings as the '081 design application.[2] Serial No. 656,601 ('601 utility application) claimed the benefit of the filing date of the '081 design application, having been denominated a "continuation" thereof. In an Office Action mailed June 6, 1985, the Patent and Trademark Office (PTO) examiner noted that "the prior application is a design application," but did not dispute that the '601 application was entitled to its filing date. On January 29, 1986, Mahurkar filed Serial No. 823,592 ('592 utility application), again claiming the benefit of the filing date of the '081 design application (the '592 utility application was denominated a continuation of the '601 utility application). In an office action mailed April 1, 1987, the examiner stated that the '592 utility application was "considered to be fully supported by applicant's parent application SN 356,081 filed March 8, 1982 [the '081 design application]." The '601 and '592 utility applications issued in 1986 and 1987, respectively, as the '329 and '141 patents, the subjects of this appeal. The independent claims of both patents are set forth in the Appendix hereto.

Vas-Cath sued Mahurkar in June 1988, seeking a declaratory judgment that the catheters it manufactured did not infringe Mahurkar's '329 and '141 utility patents.[3] Vas-Cath's complaint alleged, inter alia, that the '329 and '141 patents were both invalid as anticipated under 35 USC 102(b) by Canadian '089. Vas-Cath's anticipation theory was premised on the argument that the '329 and '141 patents were not entitled under 35 USC 120[4] to the filing date of the '081 design application because its drawings did not provide an adequate "written description" of the claimed invention as required by 35 USC 112, first paragraph.

Mahurkar counterclaimed, alleging infringement. Both parties moved for summary judgment on certain issues, including validity. For purposes of the summary judgment motion, Mahurkar conceded that, if he could not antedate it, Canadian '089 would represent an enabling and thus anticipating §102(b) reference against the claims of his '329 and '141 utility patents. 745 F.Supp. at 521, 17 USPQ2d at 1355. Vas-Cath conceded that the '081 design drawings *enabled* one skilled in the art to practice the claimed invention within the meaning of 35 USC 112, first paragraph. *Id.* Thus, the question before the district court was whether the disclosure of the '081 design application, namely, the drawings without more, adequately meets the "written description" requirement also contained in §112, first paragraph, so as to entitle Mahurkar to the benefit of the 1982 filing date of the '081 design application for his two utility patents and thereby antedates Canadian '089.

Concluding that the drawings do not do so, and that therefore the utility patents are anticipated by Canadian '089, the district court held the '329 and '141 patents wholly invalid under 35 USC 102 (b), *id.* at 524, 17 USPQ2d at 1358, and subsequently granted Mahurkar's motion for entry of a partial final judgment under Fed.R.Civ.P. 54(b) on the validity issue. This appeal followed.

DISCUSSION

The issue before us is whether the district court erred in concluding, on summary judgment, that the disclosure of the '081 design application does not provide a §112, first paragraph "written description" adequate to support each of the claims of the '329 and '141 patents. If the court so erred as to any of the 21 claims at issue, the admittedly anticipatory disclosure of Canadian '089 will have been antedated (and the basis for the court's

[2] The utility patent drawings contain additional but minor shading and lead lines and reference numerals not present in the design application drawings.

[3] Vas-Cath's apprehension of suit apparently arose from a 1988 Canadian action instituted by Mahurkar for infringement of Canadian '089.

[4] Section 120, titled "Benefit of Earlier Filing Date in the United States," provides (emphasis ours):

> An application for patent for an invention *disclosed in the manner provided by the first paragraph of section 112 of this title* in an application previously filed in the United States, or as provided by section 363 of this title, which is filed by an inventor or inventors named in the previously filed application shall have the same effect as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or on an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application.

> the case factually arises out of an assertion of entitlement to the filing date of a previously filed application under §120 . . . or arises in the interference context wherein the issue is support for a count in the specification of one or more of the parties . . . or arises in an ex parte case involving a single application, but where the claim at issue was filed subsequent to the filing of the application. . . .

Id. at 914, 178 USPQ at 623-24 (citations omitted).

The CCPA's "written description" cases often stressed the fact-specificity of the issue. *See, e.g., In re Wertheim*, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976) ("The primary consideration is *factual* and depends on the nature of the invention and the amount of knowledge imparted to those skilled in the art by the disclosure") (emphasis in original); *In re Smith*, 458 F.2d 1389, 1395, 173 USPQ 679, 683 (CCPA 1972) ("Precisely how close the description must come to comply with §112 must be left to case-by-case development"); *DiLeone*, 438 F.2d at 1405, 168 USPQ at 593 ("What is needed to meet the description requirement will necessarily vary depending on the nature of the invention claimed"). The court even went so far as to state:

> [I]t should be readily apparent from recent decisions of this court involving the question of compliance with the description requirement of §112 that each case must be decided on its own facts. Thus, the precedential value of cases in this area is extremely limited.

In re Driscoll, 562 F.2d 1245, 1250, 195 USPQ 434, 438 (CCPA 1977).

Since its inception, the Court of Appeals for the Federal Circuit has frequently addressed the "written description" requirement of §112.[6] A fairly uniform standard for determining compliance with the "written description" requirement has been maintained throughout: "Although [the applicant] does not have to describe exactly the subject matter claimed, . . . the description must clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989) (citations omitted). "[T]he test for sufficiency of support in a parent application is whether the disclosure of the application relied upon 'reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.'" *Ralston Purina Co. v. Far-Mar-Co, Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985) (quoting *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983)). Our cases also provide that compliance with the "written description" requirement of §112 is a question of fact, to be reviewed under the clearly erroneous standard. *Gosteli*, 872 F.2d at 1012, 10 USPQ2d at 1618; *Utter v. Hiraga*, 845 F.2d 993, 998, 6 USPQ2d 1709, 1714 (Fed. Cir. 1988).

There appears to be some confusion in our decisions concerning the extent to which the "written description" requirement is separate and distinct from the enablement requirement. For example, in *In re Wilder*, 736 F.2d 1516, 1520, 222 USPQ 369, 372 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 1209 (1985), we flatly stated: "The description requirement is found in 35 U.S.C. §112 and is separate from the enablement requirement of that provision." However, in a later case we said, "The purpose of the [written] description requirement [of section 112, first paragraph] is to state what is needed to fulfill the enablement criteria. These requirements may be viewed separately, but they are intertwined." *Kennecott Corp. v. Kyocera Int'l, Inc.*, 835 F.2d 1419, 1421, 5 USPQ2d 1194, 1197 (Fed. Cir. 1987), *cert. denied*, 486 U.S. 1008 (1988). "The written description must communicate that which is needed to enable the skilled artisan to make and use the claimed invention." *Id.*

[2] To the extent that *Kennecott* conflicts with *Wilder*, we note that decisions of a three-judge panel of this court cannot overturn prior precedential decisions. *See UMC Elec. Co. v. United States*, 816 F.2d 647, 652 n.6, 2 USPQ2d 1465, 1468 n.7 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1025 (1988). This court in *Wilder* (and the CCPA before it) clearly recognized, and we hereby reaffirm, that 35 USC 112, first paragraph, requires a "written description of the invention" which is separate and distinct from the enablement requirement. The purpose of the "written description" requirement is broader than to merely explain how to "make and use"; the applicant must also convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention*. The invention is, for purposes of the "written description" inquiry, *whatever is now claimed.*

The District Court's Analysis

We agree with the district court's conclusion that drawings alone *may* be sufficient to provide the "written description of the invention" required by §112, first paragraph. Several earlier cases, though not specifically framing the issue in terms of compliance with the "written description" requirement, support this conclusion.

For example, we previously stated that "[t]here is no statutory prohibition against an applicant's reliance, in claiming priority under 35 U.S.C. §120, on a disclosure in a design application if the statutory conditions are met." *KangaROOS U.S.A., Inc. v. Caldor, Inc.*, 778 F.2d 1571, 1574, 228 USPQ 32, 33 (Fed. Cir. 1985). The question whether the applicant's claim to a pocket for athletic shoes was in fact entitled to the filing date of his earlier design application was not resolved in *KangaROOS*, however. Issues of intent to deceive the PTO were involved, as well as an error of law by the district court in construing the claims of the wrong application. *Id.* at 1574-75, 228 USPQ at 34-35. The district court's grant of partial summary judgment of inequitable conduct was vacated and the case remanded for trial.

In re Berkman, 642 F.2d 427, 209 USPQ 45 (CCPA 1981) involved a claim under 35 USC 120 to the benefit of the filing date of two earlier design patent applications that included drawings of a carrying and storage case for tape cartridges and cassettes. The invention claimed in the later-filed utility application was an "insert" of "compartmented form," adapted for use in the interior of the storage case. *Id.* at 429, 209 USPQ at 47. The court characterized the dispositive issue as "whether the design applications sufficiently disclose the invention now claimed in the . . . utility application at bar." *Id.* at 429, 209 USPQ at 46. While specifically recognizing that "drawings may be used to satisfy the disclosure requirement," *id.* at 429, 209 USPQ at 46-47, the court held that Berkman's design applications "fail[ed] to disclose the claimed invention sufficiently to comply with the requirements of §112 first paragraph." As the court explained:

> Nowhere in the design applications is the word "insert" used, nor is there any indication that the interiors of the cases are inserts. The drawings do not disclose how the insert can be used to accommodate either cassette or cartridge type tape enclosures. Berkman argues that one skilled in the art would readily recognize that the interiors of the cases illustrated in the design drawings are inserts. We do not agree. There is nothing shown in the drawings to lead one of ordinary skill to such a conclusion.

Id. at 430, 209 USPQ at 47.

The issue in *In re Wolfensperger*, 302 F.2d 950, 133 USPQ 537 (CCPA 1962) was whether the specification of the applicant's utility patent application disclosing a ball valve, and particularly the drawings thereof, supported a claim limitation that read: "having, in untensioned condition, a mean diameter corresponding approximately to the mean diameter of said chamber and a radial width smaller than the radial width of said chamber. . . ." *Id.* at 952, 133 USPQ at 538. The court did not agree with the Board's conclusion that the "radial width" relationship was not supported by applicant's figure 5:

> The board's statement that "drawings alone cannot form the basis of a valid claim" is too broad a generalization to be valid and is, furthermore, contrary to well-

[6] *See, Chester v. Miller*, 906 F.2d 1574, 15 USPQ2d 1333 (Fed. Cir. 1990) (parent application's disclosure of chemical species constituted 102(b) prior art against continuation-in-part (c-i-p) application on appeal, but did not provide sufficient written description to support c-i-p's claims to encompassing genus); *In re Gosteli*, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989) (foreign priority application's disclosure of chemical subgenus was insufficient written description to support genus claims of corresponding U.S. application); *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) (application in "clear compliance" with §112 "written description" requirement with respect to claim limitation that microcapsules were "not permanently fixed"); *Utter v. Hiraga*, 845 F.2d 993, 998, 6 USPQ2d 1709, 1714 (Fed. Cir. 1988) (holding generic interference count to scroll compressor supported by written description of foreign priority application, the court stated, "A specification may, within the meaning of 35 U.S.C. §112 ¶1, contain a written description of a broadly claimed invention without describing all species that claim encompasses"); *Kennecott Corp. v. Kyocera Int'l, Inc.*, 835 F.2d 1419, 5 USPQ2d 1194 a (Fed. Cir. 1987) (parent application's lack of express disclosure of inherent "equiaxed microstructure" property did not deprive c-i-p's claims to a sintered ceramic body having said property of the benefit of parent's filing date), *cert. denied*, 486 U.S. 1008 (1988); *Ralston Purina Co. v. Far-Mar-Co., Inc.*, 772 F.2d 1570, 227 USPQ 177 (Fed. Cir. 1985) (parent application's disclosure provided adequate written description support for certain claim limitations respecting protein content, temperature, and moisture content, but not others); *In re Wilder*, 736 F.2d 1516, 222 USPQ 369 (Fed. Cir. 1984) (broadly worded title, general description of drawing, and objects of invention of parent patent application did not adequately support reissue application claims directed to genus of indicating mechanisms for dictating machines), *cert. denied*, 469 U.S. 1209 (1985); *In re Kaslow*, 707 F.2d 1366, 217 USPQ 1089 (Fed. Cir. 1983) (claims to method of redeeming merchandise coupons, comprising step of providing an audit of coupon traffic, were not supported by specification of parent application).

-settled and long-established Patent Office practice. . . . Consider, for one thing, that the sole disclosure in a design patent application is by means of a drawing. . . . For another thing, consider that the only informative and significant disclosure in many electrical and chemical patents is by means of circuit diagrams or graphic formulae, constituting "drawings" in the case. . . .

. . . The practical, legitimate enquiry in each case of this kind is what the drawing in fact discloses to one skilled in the art. . . .

. . . The issue here is whether there is supporting "disclosure" and it does not seem, under established procedure of long standing, approved by this court, to be of any legal significance whether the disclosure is found in the specification or in the drawings so long as it is there.

Id. at 955-56, 133 USPQ at 541-42.

Employing a "new matter" analysis, the court in *In re Heinle*, 342 F.2d 1001, 145 USPQ 131 (CCPA 1965) reversed a PTO rejection of the applicant's claims to a "toilet paper core" as "including subject matter having no clear basis in the application as filed." *Id.* at 1003, 145 USPQ at 133. The claim limitation said to be without support required that the width of the apertures in the core be "approximately one-fourth of the circumference of said core." *Id.* at 1007, 145 USPQ at 136. Having reviewed the application drawings relied upon for support, the court stated:

it seems to us that [the drawings] conform to the one-fourth circumference limitation almost exactly. But the claim requires only an approximation. Since we believe an amendment to the specification to state that one-fourth of the circumference is the aperture width would not violate the rule against "new matter," we feel that supporting disclosure exists. The rejection is therefore in error.

Id.

[3] These cases support our holding that, under proper circumstances, drawings alone may provide a "written description" of an invention as required by §112. Whether the drawings are those of a design application or a utility application is not determinative, although in most cases the latter are much more detailed. In the instant case, however, the design drawings are substantially identical to the utility application drawings.

Although we join with the district court in concluding that drawings may suffice to satisfy the "written description" requirement of §112, we can not agree with the legal standard that the court imposed for "written description" compliance, nor with the court's conclusion that no genuine issues of material fact were in dispute.

With respect to the former, the district court stated that although the '081 design drawings in question "allowed practice" [i.e., enabled], they did not necessarily

show what the invention is, when "the invention" could be a subset or a superset of the features shown. Is the invention the semi-circular lumens? The conical tip? The ratio at which the tip tapers? The shape, size, and placement of the inlets and outlets? You can measure all of these things from the diagrams in serial '081 and so can practice the device, but you cannot tell, because serial '081 does not say, what combination of these things is "the invention", and what range of variation is allowed without exceeding the scope of the claims. To show one example of an invention, even a working model, is not to describe what is novel or important.

745 F.Supp. at 522, 17 USPQ2d at 1356.

[4] We find the district court's concern with "what the invention is" misplaced, and its requirement that the '081 drawings "describe what is novel or important" legal error. There is "no legally recognizable or protected 'essential' element, 'gist' or 'heart' of the invention in a combination patent." *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 345 [128 USPQ 354] (1961). "The invention" is defined by the claims on appeal. The instant claims do not recite *only* a pair of semi-circular lumens, or a conical tip, or a ratio at which the tip tapers, or the shape, size, and placement of the inlets and outlets; they claim *a double lumen catheter* having a *combination* of those features. That combination invention *is* what the '081 drawings show. As the district court itself recognized, "what Mahurkar eventually patented is exactly what the pictures in serial '081 show." 745 F.Supp. at 523, 17 USPQ2d at 1357.

We find the "range of variation" question, much emphasized by the parties, more troublesome. The district court stated that "although Mahurkar's patents use the same diagrams, [the claims] contain limitations that did not follow ineluctably [i.e., inevitably] from the diagrams." *Id.* at 524, 17 USPQ2d at 1357. As an example, the court stated (presumably with respect to independent claims 1 and 7 of the '329 patent) that

the utility patents claim a return lumen that is "substantially greater than one-half but substantially less than a full diameter" after it makes the transition from semi-circular to circular cross-section, and the drawings of serial '081 fall in this range. But until the utility application was filed, nothing established that they had to — for that matter that the utility patent would claim anything other than the *precise* ratio in the diagrams. . . .

Id. at 523, 17 USPQ2d at 1357. Mahurkar argues that one of ordinary skill in this art, looking at the '081 drawings, would be able to derive the claimed range.

The declaration of Dr. Stephen Ash, submitted by Mahurkar, is directed to these concerns. Dr. Ash, a physician specializing in nephrology (the study of the kidney and its diseases) and chairman of a corporation that develops and manufactures biomedical devices including catheters, explains why one of skill in the art of catheter design and manufacture, studying the drawings of the '081 application in early 1982, would have understood from them that the return lumen must have a diameter within the range recited by independent claims 1 and 7 of the '329 patent. Dr. Ash explains in detail that a return (longer) lumen of diameter less than half that of the two lumens combined would produce too great a pressure increase, while a return lumen of diameter equal or larger than that of the two lumens combined would result in too great a pressure drop.[1] "Ordinary experience with the flow of blood in catheters would lead directly away from any such arrangement," Ash states.

Although the district court found this reasoning "logical," it noted that later patents issued to Mahurkar disclose diameter ratios closer to 1.0 (U.S. Patent No. 4,584,968) and exactly 0.5 (U.S. Des. Patent No. 272,651). If these other ratios were desirable, the district court queried, "how does serial '081 necessarily exclude the[m]?" 745 F.Supp. at 523, 17 USPQ2d at 1357.

[5] The district court erred in taking Mahurkar's other patents into account. Mahurkar's *later* patenting of inventions involving different range limitations is irrelevant to the issue at hand. Application sufficiency under §112, first paragraph, must be judged as of the filing date. *United States Steel Corp. v. Phillips Petroleum Co.*, 865 F.2d 1247, 1251, 9 USPQ2d 1461, 1464 (Fed. Cir. 1989).

[6] The court further erred in applying a legal standard that essentially required the drawings of the '081 design application to *necessarily exclude* all diameters other than those within the claimed range. We question whether any drawing could ever do so. At least with respect to independent claims 1 and 7 of the '329 patent and claims depending therefrom, the proper test is whether the drawings conveyed with reasonable clarity to those of ordinary skill that Mahurkar had in fact invented the catheter recited in those claims, having (among several other limitations) a return lumen diameter substantially less than 1.0 but substantially greater than 0.5 times the diameter of the combined lumens. Consideration of what the drawings conveyed to persons of ordinary skill is essential. *See Ralston Purina*, 772 F.2d at 1575, 227 USPQ at 179 (ranges found in applicant's claims need not correspond *exactly* to those disclosed in parent application; issue is whether one skilled in the art could derive the claimed ranges from parent's disclosure).

Mahurkar submitted the declaration of Dr. Ash on this point; Vas-Cath submitted no technical evidence to refute Ash's conclusions. Although the district court considered Dr. Ash's declaration, we believe its import was improperly disregarded when viewed through the court's erroneous interpretation of the law.[*] We hold that the Ash declaration and Vas-Cath's non-refutation thereof, without more, gave rise to a genuine issue of material fact inappropriate for summary disposition. *See Hesston Corp. v. Sloop*, 1988 U.S. Dist. LEXIS 1573, *13 (D. Kansas) (summary judgment on §112 "written description" issue inappropriate where resolution of what parent disclosure conveyed to those skilled in the art may require examination of experts, demonstrations and exhibits).

[1] Higher pressure drops are associated with smaller cross-sectional areas for fluid flow. Mahurkar's opening brief to this court states that by applying well-known principles of fluid mechanics (i.e., the work of Poiscuille and Hagen), it can be calculated that the diameter of the circular (return) lumen would have to be in the range of 0.66 times the diameter of the two lumens combined in order to achieve proper blood flow at equal pressure drop. The 0.66 ratio falls within the noted claim limitation.

[*] The following colloquy at oral argument before the district court supports our view:

Counsel for Mahurkar: "So the only evidence that we have on this subject from people of ordinary skill in the art is that the drawings do communicate these range limitations, and given the procedural posture of this case, the Court has to accept that evidence. . . ."

District Court: * * * "And if you could have written a large number of things that were different from what was actually filed in 1984, then the diagram isn't enough.

And that seems to me something that can't be resolved by ogling the Ash declaration. It's really a pure question of law."

Mahurkar urges that at least some of the remaining claims do not contain the range limitations discussed by the district court, and that the presence of range limitations was not a proper basis for invalidating those remaining claims. For example, claim 8 of the '141 patent requires, inter alia, a smooth conical tapered tip and "the portion of said tube between said second opening and said conical tapered tip *being larger than* said first lumen in the transverse direction normal to the plane of said septum." Vas-Vath counters that claim 8 of the '141 patent is just as much a "range" claim as claims 1 and 7 of the '329 patent, albeit one having only a lower limit and no upper limit.

Absent any separate discussion of these remaining claims in the district court's opinion, we assume that the court applied to them the same erroneous legal standard. Summary judgment was therefore inappropriate as to the remaining claims. Additionally, the possibility that the '081 drawings may provide an adequate §112 "written description" of the subject matter of some of the claims but not others should have been considered. *See, e.g., In re Borkowski*, 422 F.2d 904, 909 n.4, 164 USPQ 642, 646 n.4 (CCPA 1970) (on review of §112 non-enablement rejection: "A disclosure may, of course, be insufficient to support one claim but sufficient to support another.") On remand, the district court should *separately* analyze whether the "written description" requirement has been met as to the subject matter of *each* claim of the '141 and '329 patents.

CONCLUSION

The district court's grant of summary judgment, holding all claims of the '329 and '141 patents invalid under 35 USC 102(b), is hereby reversed as to all claims, and the case remanded for further proceedings consistent herewith.

COSTS

Each party to bear its own costs.
REVERSED and *REMANDED*

APPENDIX

Independent Claims of the '329 Patent:

1. A double lumen catheter having an elongated tube with a proximal first cylindrical portion enclosing first and second lumens separated by an internal divider, the proximal end of said elongated tube connecting to two separate connecting tubes communicating with the respective first and second lumens for the injection and removal of fluid, the first lumen extending from the proximal end of said elongated tube to a first opening at the distal end of said elongated tube, and the second lumen extending from the proximal end of said elongated tube to a second opening at approximately the distal end of said first cylindrical portion, wherein the improvement comprises:

said elongated tube having at its distal end a smooth conical tapered tip that smoothly merges with a second cylindrical portion of said elongated tube, and said second cylindrical portion enclosing the first lumen from the conical tapered tip to approximately the location of said second opening, wherein said second cylindrical portion has a diameter substantially greater than one-half but substantially less than a full diameter of said first cylindrical portion.

7. A double lumen catheter having an elongated tube with a proximal first cylindrical portion enclosing first and second lumens separated by an internal divider, the proximal end of said elongated tube connecting to two separate connecting tubes communicating with the respective first and second lumens for the injection and removal of fluid, the first lumen extending from the proximal end of said elongated tube to a first opening at the distal end of said elongated tube, and the second lumen extending from the proximal end of said elongated tube to a second opening at approximately the distal end of said first cylindrical portion, wherein the improvement comprises:

said elongated tube having at its distal end a smooth conical tapered tip that smoothly merges with a second cylindrical portion of said elongated tube, and said second cylindrical portion enclosing the first lumen from the conical tapered tip to approximately the location of said second opening, said second cylindrical portion having a diameter substantially greater than one-half but substantially less than a full diameter of said first cylindrical portion, said divider in said first cylindrical portion being planar, the lumens being "D" shaped in cross-section in said first cylindrical portion, the elongated tube being provided with a plurality of holes in the region of the conical tapered tip, and said first cylindrical portion of the elongated tube smoothly merging with said second cylindrical portion of the elongated tube.

Independent Claims of the '141 Patent:

1. A double lumen catheter having an elongated tube with a proximal first cylindrical portion enclosing first and second lumens separated by an internal divider, the proximal end of said elongated tube connecting to two separate connecting tubes communicating with the respective first and second lumens for the injection and removal of fluid, the first lumen extending from the proximal end of said elongated tube to a first opening at the distal end of said elongated tube, and the second lumen extending from the proximal end of said elongated tube to a second opening at approximately the distal end of said first cylindrical portion, wherein the improvement comprises:

said elongated tube having at its distal end a smooth conical tapered tip that smoothly merges with a second cylindrical portion of said elongated tube, and said second cylindrical portion enclosing the first lumen from the conical tapered tip to approximately the location of said second opening, wherein said second sylindrical [sic] portion has a diameter substantially less than a full diameter of said first cylindrical portion but larger than said first lumen in the transverse direction normal to the plane of said flat divider.

7. A double lumen catheter comprising an elongated cylindrical tube enclosing first and second lumens separated by a flat longitudinal internal divider formed as an integral part of said tube, said tube and said divider forming said first and second lumens as semi-cylindrical cavities within said tube, the proximal end of said elongated tube connecting to two separate connecting tubes communicating with the respective first and second lumens for the injection and removal of fluid, the first lumen extending from the proximal end of said elongated tube to a first opening at the distal end of said elongated tube, said distal end of said tube forming a smooth conical tapered tip and the second lumen extending from the proximal end of said elongated tube to a second opening spaced a substantial distance away from said first opening toward the proximal end of said tube, the distal end of said divider being joined to the outside wall of said tube distal of said second opening, and the outside wall of said tube forming a smooth transition between said conical tapered tip and the outer circumference of the tube proximal of said second opening, said transition being larger than said first lumen in the transverse direction normal to the plane of said flat divider.

8. A double lumen catheter comprising an elongated cylindrical tube having a longitudinal planar septum of one-piece construction with said tube, said septum dividing the interior of said tube into first and second lumens, said lumens being D-shaped in cross-section, the proximal end of said tube connecting to two separate tubes communicating with the respective first and second lumens for the injection and removal of fluids, the lumen extending from the proximal end of said tube to a first lumen extending from the proximal end of said tube to a first opening at the distal end of said tube, and the second lumen extending from the proximal end of said tube to a second opening axially spaced from the distal end of said tube, said tube having at its distal end a smooth conical tapered tip that merges with the cylindrical surface of said tube, said first lumen, including the internal wall thereof formed by said septum extending continuously through said conical tapered tip, and the portion of said tube between said second opening and said conical tapered tip being larger than said first lumen in the transverse direction normal to the plane of said septum.

13. A double lumen catheter comprising an elongated cylindrical tube enclosing first and second lumens separated by a flat longitudinal internal divider formed as an integral part of said tube, said tube and said divider forming said first and second lumens as semi-cylindrical cavities within said tube, the proximal end of said elongated tube connecting to two separate connecting tubes communicating with he [sic] respective first and second lumens for the injection and removal of fluid, the first lumen extending from the proximal end of said elongated tube to a first opening at the distal end of said elongated tube, said distal end of said tube forming a smooth conical tapered tip defining the distal portion of said first lumen and said first opening, said first opening and an adjacent portion of said first lumen having a circular transverse cross-sectional configuration, and the second lumen extending from the proximal end of said elongated tube to a second opening spaced a substantial distance away from said first opening toward the proximal end of said tube, the inside walls of said tube forming a smooth transition between said semicylindrical and circular transverse cross-sectional configurations of said first lumen, the outside dimension of said transition being larger than said first lumen in the transverse direction normal to the plane of said flat divider.

District Court, N.D. Illinois

Spraying Systems Co. v. Delavan Inc.

No. 89 C 8447

[3] Intent to abandon a trademark may inferred from the surrounding circumstances. Drexel Enterprises, Inc. v. chardson, 312 F.2d 525, 136 USPQ 25 0th Cir.). There was also established a ma facie case of abandonment by reason a nonuse for two consecutive years. 15 S.C. §1127. Although there was ample dence of the brothers' intent to continue "Love" trademark between themselves at least by one of them, K. C. Love's in- t to use the trademark in the future is not ficient to avoid abandonment. American otographic Pub. Co. v. Ziff-Davis Pub. ., 135 F.2d 569, 57 USPQ 362 (7th Cir.). t is only through J. H. Love's use of the ove" trademark that K. C. Love claims right to the trademark. The K. C. Love tnership had no business affiliation with J. H. Love partnership. K. C. Love ob- ned no derivative rights to the trademark m J. H. Love's use of it. The brotherly e between the Love brothers was not ough to overcome K. C. Love's abandon- nt of the trademark.

When J. H. Love sold the entire business ets and goodwill to the plaintiff, it was until eight years later that K. C. Love in used this trademark. Even this ap- ently came about through a shipment of slabeled bottles. From the cor- pondence in the record, it is apparent t K. C. Love knew that they would lose trademark if J. H. Love sold his business least without excepting it. These eight rs in themselves show abandonment ause of the nonuse with full knowledge t someone other than his brother was us- the trademark.

The defendants assert that testimony and respondence also evidence a gift of the demark to K. C. Love. There was dence of a donative intent of J. H. Love, a questionable acceptance by K. C. e, but nothing to evidence a gift had one n more than intended. There was no gument.

The defendants do raise the defenses of ppel and acquiescence, but they are not licable here since the plaintiff did not iesce in K. C. Love's use of the "Love" emark. J. H. Love may have intended to iesce in K. C. Love's future use of the emark, but since K. C. Love never used trademark again, such intent if it existed no use to him now.

[4] The defendants urge that under the l sale contract, the plaintiff was only ted a limited use of the trademark in the r area specified. The contract does not mention Trademark No. 617,924 specifically. Yet J. H. Love sold his entire business including the goodwill, and the goodwill and the trademark are inseparable. Hanover Star Milling Co. v. Metcalf, 240 U.S. 403; Kidd v. Johnson, 100 U.S. 617; Ph. Schneider Brewing Co. v. Century Distilling Co., 107 F.2d 699, 42 USPQ 262 (10th Cir.). No particular words are necessary for the assignment when the business and the goodwill are transferred to another who continued the operation under the same trademark. Holly Hill Citrus Growers' Ass'n v. Holly Hill Fruit Products, Inc., 75 F.2d 13, 24 USPQ 229 (5th Cir.). See Ph. Schneider Brewing Co. v. Century Distilling Co., 107 F.2d 699, 42 USPQ 262 (10th Cir.). Furthermore, the trial judge correctly found that "trade name" used in the contract meant "trademark". 15 U.S.C. §1127.

[5] The trade area specification in the contract was not a limitation on the grant of the trademark, but a description of the J. H. Love partnership's trade area where the covenant not to compete was in effect. The J. H. Love partnership could only grant what rights it had in the trademark. The right to a trademark only extends to the area in which it is used and does not extend this right to other areas where it may be deemed desirable to extend the trade. United Drug Co. v. Theodore Rectanus Co., 248 U.S. 90; Blue Bell Co. v. Frontier Refining Co., 213 F.2d 354, 101 USPQ 360 (10th Cir.).

The defendants complain that without a reversal of the trial court's decision, several questions are left unanswered. We disagree. The trademark is at issue, not K. C. Love's trade name or his use of it. 15 U.S.C. §1115(b)(4). With exclusive ownership of the trademark in the plaintiff, and abandonment of it on the part of K. C. Love, there is no question of territorial rights in the trademark between these two litigants in their present locations.

Court of Customs and Patent Appeals

In re Johnson and Farnham

No. 76-643 Decided June 16, 1977

PATENTS

1. Claims — Indefinite — In general (§20.551)

Construction of specification and claims — By prior art (§22.20)

Analysis of 35 U.S.C. 112 second paragraph rejection should begin with determination of whether claims satisfy requirements of second paragraph; first inquiry, therefore, is to determine whether claims set out and circumscribe particular area with reasonable degree of precision and particularity; it is here where definiteness of language employed must be analyzed, not in vacuum, but always in light of teachings of prior art and of particular application disclosure as it would be interpreted by one possessing ordinary level of skill in pertinent art.

2. Claims — Indefinite — In general (§20.551)

Claims — Specification must support (§20.85)

Undue breadth of claims is not indefiniteness.

3. Construction of specification and claims — By specification and drawings — In general (§22.251)

Claim language must be read in light of specification as it would be interpreted by one of ordinary skill in art.

4. Claims — Indefinite — In general (§20.551)

Claims — Specification must support (§20.85)

Pleading and practice in Patent Office — Rejections (§54.7)

Specification — Sufficiency of disclosure (§62.7)

Examiner's rejection premised on general ground that claims are "broader than the express limitation disclosed as defining the invention" and specific grounds that "express disclosure is clearly limited to the sigma value recited in claim 1," raises lack of enablement issue properly arising under first not second paragraph of Section 112.

5. Specification — In general (§62.1)

Specification — Claims as disclosure (§62.3)

It is function of specification, not claims, to set forth "practical limits of operation" of invention; one does not look to claims to find out how to practice invention they define, but to specification.

6. Claims — Specification must support (§20.85)

Construction of specification and claims — In general (§22.01)

Specification — Sufficiency of disclosure (§62.7)

Specification as whole must be considered in determining whether scope of enablement provided by specification is commensurate with scope of claims.

7. Construction of specification and claims — Broad or narrow — In general (§22.101)

Patent grant — Intent of patent laws (§50.15)

Specification — Sufficiency of disclosure (§62.7)

Claims must adequately protect inventors to provide effective incentives; to demand that first to disclose shall limit his claims to what he has found will work or to materials that meet guidelines specified for "preferred" materials in involved process would not serve constitutional purpose of promoting progress in useful arts.

8. Applications for patent — Continuing (§15.3)

Applicants are entitled to benefit of filing date of parent application that discloses invention of application in manner provided by Section 112, paragraph 1.

9. Claims — Broad or narrow — In general (§20.201)

Estoppel — Involving interference (§35.20)

It is for inventor to decide what bounds of protection he will seek; it is applicant's right to retreat to otherwise patentable species merely because he erroneously thought he was first with genus when he filed.

10. Specification — Sufficiency of disclosure (§62.7)

Notion that one who fully discloses, and teaches those skilled in art how to make and

use genus and numerous species has failed to disclose and teach those skilled in art how to make and use genus minus two species and has thus failed to satisfy Section 112 first paragraph requirement results from hypertechnical application of legalistic prose relating to that provision of statute.

11. Pleading and practice in Patent Office — In general (§54.1)

Specification — Sufficiency of disclosure (§62.7)

While insufficiency under 35 U.S.C. 112 cannot be cured by citing causes for insufficiency, it is not true that factual context out of which question under Section 112 arises is immaterial; specification having described whole invention necessarily described part remaining after invention of another was excised.

Particular patents — Polyarylene Polyethers

Johnson and Farnham, Polyarylene Polyethers, rejection of claims 1-9, 64, and 68-72 reversed.

Appeal from Patent and Trademark Office Board of Appeals.

Application for patent of Robert N. Johnson and Alford G. Farnham, Serial No. 230,091, filed Feb. 28, 1972, continuation-in-part of application Serial No. 295,519, filed July 16, 1963. From decision rejecting claims 1-9, 64, and 68-72, applicants appeal. Reversed; Lane, Judge, dissenting in part with opinion.

Robert C. Brown and Aldo J. Cozzi, both of New York, N.Y. (James C. Arvantes, New York, N.Y., of counsel) for appellants.

Joseph F. Nakamura (Henry W. Tarring, II, of counsel) for Commissioner of Patents and Trademarks.

Before Markey, Chief Judge, and Rich, Baldwin, Lane, and Miller, Associate Judges.

Markey, Chief Judge.

This appeal is from the decision of the Patent and Trademark Office (PTO) Board of Appeals affirming the rejection under 35 USC 102 or 103 (the rejection also raises a written description issue under 35 USC 112, first paragraph) of claims 1-9, 64, and 68-70 and the rejection under 35 USC 112, first paragraph (enablement) and second paragraph (indefiniteness), of claims 64 and 68-72 in appellants' application No. 230,091 filed February 28, 1972 (the 1972 application) for "Polyarylene Polyethers." The 1972 application is a continuation-in-part of three earlier applications, the earliest being application No. 295,519 filed July 16, 1963 (the 1963 application). We reverse.

The Invention

The invention is in the field of polymer chemistry and more specifically relates to linear thermoplastic polyarylene polyether polymers composed of recurring units having the general formula $+O\text{-}E\text{-}O\text{-}E'+$ where O represents an oxygen atom,[1] E represents the residuum of a dihydric phenol[2] compound, and E' represents the residuum of a benzenoid compound having one or more inert electron withdrawing groups[3] in the ortho[4] or para[5] positions to the valence bonds and where both E and E' are bonded to the ether oxygens through aromatic carbon atoms.

Appellants describe a method of synthesizing these polymers by reacting a double alkali metal salt of a dihydric phenol with a dihalobenzenoid compound in the presence of certain solvents under substantially anhydrous reaction conditions.

The 1972 application includes the following disclosure with respect to the electron withdrawing group found in E' and in the E' precursor compound, that is, in the compound which is the predecessor of E' in the above general formula (we have designated paragraphs [A] and [B] and have added emphasis thereto):

> Any electron withdrawing group can be employed as the activator group in these compounds. It should be, of course, inert to the reaction, but otherwise its structure is not critical. Preferred are the strong activating groups such as the sulfone group
>
> O
> ||
> (-S-) bonding two halogen substituted
> ||
> O
>
> benzenoid nuclei as in the 4,4'-dichlorodiphenyl sulfone and 4,4'-difluorodiphenyl sulfone, although such other strong withdrawing groups hereinafter mentioned can also be used with equal ease.
>
> The more powerful of the electron withdrawing groups give the fastest reactions and hence are preferred. It is further preferred that the ring contain no electron supplying groups on the same benzenoid nucleus as the halogen; however, the presence of other groups on the nucleus or in the residuum of the compound can be tolerated. Preferably, all of the substituents on the benzenoid nucleus are either hydrogen (zero electron withdrawing), or other groups having a positive sigma* value, as set forth in J.F. Bunnett in Chem. Rev. 49 273 (1951) and Quart Rev., 12, 1 (1958). See also Taft, Steric Effects in Organic Chemistry, John Wiley & Sons (1956), chapter 13; Chem. Rev., 53, 222; JACS, 74, 3120; and JACS, 75, 4231.[6]
>
> The electron withdrawing group of the dihalobenzenoid compound can function either through the resonance of the aromatic ring, as indicated by those groups having a high sigma* value, i.e., above about +0.7 or by induction as in perfluoro compounds and like electron sinks.
>
> *[A]*
>
> *Preferably the activating group should have a high sigma* value, preferably above 1.0, although sufficient activity to promote the reaction is evidenced in those groups having a sigma value above 0.7, although the reaction rate with such a low powered electron withdrawing group may be somewhat low.*
>
> The activating group can be basically either of two types:
>
> (a) monovalent groups that activate one or more halogens on the same ring as a nitro group, phenylsulfone, or alkylsulfone, cyano, trifluoromethyl, nitroso, and hetero nitrogen as in pyridine.
>
> (b) divalent group [sic] which can activate displacement of halogens on two different rings, such as the sulfone group $-\overset{O}{\overset{\|}{S}}-$; the carbonyl group $-\overset{O}{\overset{\|}{C}}-$; the vinyl group $-\overset{O^-}{\overset{|}{C}}=\overset{H^+}{\overset{|}{C}}-$; the sulfoxide group $-\overset{O}{\overset{\|}{S}}-$; the azo group $-N=N-$; the saturated fluorocarbon groups $-CF_2CF_2-$; organic phosphine oxides $-\overset{O}{\overset{\|}{\underset{\|}{P}}}-$; where R is a hydrocarbon group, and the ethylidene group $-\overset{X}{\overset{|}{C}}-X$ where X can be hydrogen or halogen or which can activate halogens on the same ring such as with difluorobenzoquinone, 1,4- or 1,5- or 1,8-difluoroanthraquinone.
>
> *[B]*
>
> *Those skilled in the art will understand that a plurality of electron withdrawing groups may be employed if desired, including electron withdrawing groups having a sigma* value below about +0.7 provided the cumulative sigma* influence on each of the reactive halogen groups of the halobenzenoid compound is at least about +0.7.*

---

[1] Claims 10-54 and 65-67 stand allowed. A petition for reconsideration was denied by the board.

[2] The - O - linkages in the general formula are called ether linkages.

[3] A dihydric phenol is a type of aromatic organic compound in which two hydroxy (-OH) groups are attached directly to a benzene ring.

[4] An electron withdrawing group is a substituent which withdraws electrons from the aromatic ring to which it is attached.

[5] An aromatic ring bearing substituents on adjacent carbon atoms is called ortho substituted.

[6] An aromatic ring bearing substituents on opposite carbon atoms is called para substituted.

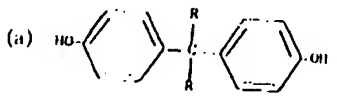
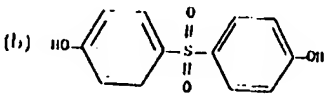
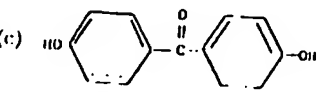
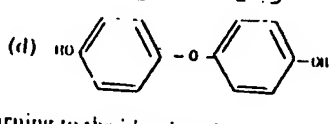
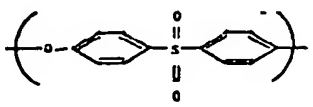
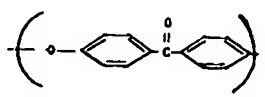
[7] Appellants' brief specifically refers to one of the publications cited (Chem. Rev., 53, 222 [1953]) and states that its author (Jaffe) defines the sigma* value as a "special substituent constant" for the "Hammett equation" which is an empirically derived formula intended to show a general quantitative relation between the nature of a given substituent and the reactivity of a side chain. Thus, sigma* values are based on experimental data and they measure the "activation energy" of a given substituent (electron withdrawing group).

The Disclosure and Prosecution History of the 1963 Application

To understand the written description issue in this appeal, it is necessary to summarize the disclosure and prosecution history of the 1963 application. The 1963 application described (and claimed) in haec verba a genus of polymers as defined by the above general formula. That application stated:

> The high molecular weight polyarylene polyethers of the present invention are the linear thermoplastic reaction products of an alkali metal double salt of a dihydric phenol and a dihalobenzenoid compound. Characteristically, this polymer has a basic structure composed of recurring units having the formula
>
> -O-E-O-E'-
>
> wherein E is the residuum of the dihydric phenol and E' is the residuum of the benzenoid compound, both of which are valently bonded to the ether oxygen through aromatic carbon atoms, as hereinafter more fully discussed. Polymers of this type exhibit excellent strength and toughness properties as well as outstanding thermal, oxidative and chemical stability.

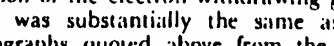
The 1963 application then discussed the identity of E and the E precursor compound, that is, the compound which is the predecessor of E in the general formula. It stated:

> The residuum E of the dihydric phenol of these alkali metal salts is not narrowly critical. It can be, for instance, a mononuclear phenylene group as results from hydroquinone and resorcinol, or it may be a di- or polynuclear residuum. Likewise it is possible that the residuum be substituted with other inert nuclear substituents such as halogen, alkyl, alkoxy and like inert substituents.
>
> • • •
>
> Such dinuclear phenols can be characterized as having the structure:
>
> $$HO(Ar\text{-}R\text{-}Ar)OH$$
>
> wherein Ar is an aromatic group and preferably is a phenylene group, Y and Y' can be the same or different inert substituent groups as alkyl groups having from 1 to 4 carbon atoms, halogen atoms, i.e. fluorine, chlorine, bromine or iodine, or alkoxy radicals having from 1 to 4 carbon atoms, r and z are integers having a value from 0 to 4, inclusive, and R is representative of a bond between aromatic carbon atoms as in dihydroxydiphenyl, or is a divalent radical, including for example, inorganic radicals as
>
> $$-C-,\ -O-,\ -S-,\ -S-S-,\ -SO_2-,$$
>
> and divalent organic hydrocarbon radicals such as alkylene, alkylidene, cycloaliphatic, or the halogen, alkyl, aryl or like substituted alkylene, alkylidene and cycloaliphatic radicals as well as alkalicyclic, alkarylene and aromatic radicals and a ring fused to both Ar group[s].
>
> The application then mentioned by name some fifty specific dihydric dinuclear phenol (bisphenol) compounds which could be the E precursor compound. The application further stated:
>
> A preferred form of the polyarylene polyethers of this invention are those prepared using the dihydric polynuclear phenols of the following four types, including the derivatives thereof which are substituted with inert substituent groups
>
> (a) 
>
> in which the R group represents hydrogen, lower alkyl, lower aryl and the halogen substituted groups thereof, which can be the same or different.
>
> (b) 
>
> (c) 
>
> (d) 
>
> Turning to the identity of the E' precursor compound, the application stated:
>
> Any dihalobenzenoid compound or mixture of dihalobenzenoid compounds can be employed in this invention which compound or compounds has the two halogens bonded to benzene rings having an electron withdrawing group in at least one of the positions ortho and para to the halogen group. The dihalobenzenoid compound can be either mononuclear where the halogens are attached to the same benzenoid ring or polynuclear where they are attached to different benzenoid rings, as long as there is the activating electron withdrawing group in the ortho or para position of that benzenoid nucleus.
>
> The 1963 application also included a discussion of the electron withdrawing group that was substantially the same as the paragraphs quoted above from the 1972 application.
>
> The 1963 application contained twenty-six "examples" disclosing in detail the physical and chemical characteristics of fifteen species of polyarylene polyethers. One of the species was the polymer composed of these recurring structural units (which we designate as species [1]):[a]
>
> [1]
>
> 
>
> Another species disclosed was the polymer composed of these recurring structural units (which we designate as species [2]):[b]
>
> [2]
>
> 
>
> Appellants' 1963 application became involved in a three-party interference[c] which resulted in an award of priority adverse to appellants from which they did not appeal.[d] [e] The sole count of the interference recited species [1].

After their involvement in the interference ended, appellants filed the 1972 application, and they sought broad claims which would at the same time exclude the subject matter of the lost count.

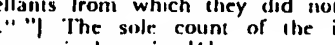
The Claims

Claim 1, now on appeal, is illustrative of the group of claims (claims 1-9, 64, and 68-70) which seek to exclude the subject matter of the lost count and which are involved in the 35 USC 102 or 103 rejection:

> 1. A substantially linear thermoplastic polyarylene polyether composed of recurring units having the general formula:
>
> 
>
> where E is the residuum of a dihydric phenol and E' is the residuum of a benzenoid compound having an inert electron withdrawing group in one or more of the positions ortho and para to the valence bonds having a sigma* value above about +0.7, and where both of said residuum [sic, residua] are valently bonded to the ether oxygens through aromatic carbon atoms *with the provisos that E and E' may not both include a divalent sulfone group and may not both include a divalent carbonyl group linking two aromatic nuclei.* [Emphasis added.]

The first "proviso" in claim 1, that "E and E' may not both include a divalent sulfone group," excludes species [1], the species of the lost count. The second "proviso," that "E and E' • • • may not both include a divalent carbonyl group," excludes species [2], which appellants state is "analogous" or "equivalent" to species [1]."

Claims 64 and 71 are illustrative of the group of claims (claims 64 and 68-72) rejected under 35 USC 112, first and second paragraphs:

> 64. A substantially linear thermoplastic polyarylene polyether composed of recurring units having the general formula:
>
> 
>
> where E is the residuum of a dihydric phenol and E' is the residuum of a

[a] The -SO_2- linking group in species [1] is called a sulfone group.

[b] The -CO- linking group in species [2] is called a carbonyl group.

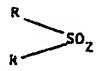
[c] Interference No. 95,807, declared February 17, 1967.

[d] Another party did appeal. See Vogel v. Jones, 486 F.2d 1068, 179 USPQ 425 (CCPA 1973)

[e] The provisos actually exclude more than species [1] and [2]. For example, polymers similar to species [1] and [2] but having substituted ring structures are also excluded.

benzenoid compound having one or more inert electron withdrawing groups in at least one of the position [sic, positions] ortho and para to the valence bonds having a sigma* value *sufficient to activate a halogen atom* and where both of said residuum [sic, residua] are valently bonded to the ether oxygens through aromatic carbon atoms with the provisos that E and E' may not both include a divalent carbonyl group linking two aromatic nuclei. [Emphasis added.]

71. The process for preparing substantially linear polyarylene polyethers which comprises reacting substantially equimolar amounts of an alkali metal double salt of a dihydric phenol with a dihalobenzenoid compound *having halogen atoms activated by an inert electron withdrawing group* in at least one of the positions ortho and para to the halogen atom, under substantially anhydrous conditions and in the liquid phase of an organic solvent having the formula:



in which R represents a member of the group consisting of monovalent lower hydrocarbon groups free of aliphatic unsaturation on the alpha carbon atom and, when connected together represents a divalent alkylene group, and Z is an integer from 1 to 2 inclusive. [Emphasis added.]

The Rejections

The sole reference relied upon by the examiner and the board is:

Netherlands 6,408,130 January 18, 1965

Claims 1-9, 64, and 68-70 were rejected under 35 USC 102 or 103 as unpatentable in view of the Netherlands patent, which is a foreign-filed counterpart of appellants' 1963 application.

Before the PTO, appellants conceded that the invention was fully disclosed in the Netherlands patent. However, appellants contended that the claims are entitled to the benefit of the 1963 filing date under 35 USC 120," and therefore the Netherlands patent is not available as a prior art reference.

" §120. Benefit of earlier filing date in the United States.

The examiner and the board were of the view that the claims are not entitled to the 1963 filing date because the presently claimed subject matter is not "described" in the 1963 application as required by the first paragraph of 35 USC 112." As explained by the board:

> The question determinative of the issue at hand is thus whether or not appellants are entitled to the filing date of their parent application Serial No. 295,519, i.e., July 16, 1963. An answer to this question quite obviously depends on what is the invention defined by the instant claims. Is it the same as the one disclosed in [the] parent case or does it differ therefrom in a manner which precludes the instant claims from being afforded the filing date of the parent case?
>
> Under the rationale of the CCPA as set forth in In re Welstead, 59 CCPA 1105, 463 F.2d 1110, 174 USPQ 449 (compare also In re Lukach et al., 58 CCPA 1233, 442 F.2d 967, 169 USPQ 795, and In re Smith [(I)], 59 CCPA 1025, 458 F.2d 1389, 173 USPQ 679), which we deem controlling, we are constrained to conclude that the present claims are not entitled to the filing date of appellants' parent case Serial No. 295,519. The claims at issue contain provisos that E and E' may not both include a divalent sulfone group and may not both include a divalent carbonyl group linking two aromatic nuclei. The artificial subgenus thus created in the claims is not described in the parent case and would be new matter if introduced into the parent case. It is thus equally "new matter," i.e., matter new to the present application for which no antecedent basis exists in the parent case. Consequently, appellants are not entitled to rely on the filing date of their parent case to support a new subgenus for which no basis exists in the parent case. The reason why appellants now limit their claims to exclude those species eliminated by the provisos, i.e., loss in an interference, is manifestly immaterial.

Having reached the conclusion that appellants are not entitled to the filing date of their parent case for the subject matter defined by the present claims which delineate a new subgenus not described in the parent case, it follows that the Netherlands patent is a valid reference which, by appellants' own admission, fully meets the claims. The indicated rejection of claims 1-9, 64 and 68-70 under 35 U.S.C. 102 as unpatentable over the Netherlands patent is thus affirmed. The alternative reliance by the Examiner on Section 103 is inconsequential, Section 102 of the statute being the epitome of Section 103. In re Pearson, (CCPA), 494 F.2d 1399, 181 USPQ 641.

Claims 64 and 68-72 were rejected under 35 USC 112, first and second paragraphs. In an Answer, the examiner stated that the claims were rejected under §112, first paragraph, for "being broader than the enabling disclosure" and under §112, second paragraph," for being "broader than the express limitations disclosed as defining the invention." The examiner said the "specific deficiencies of the claims and disclosure" are that the expression "to activate a halogen" (claim 64) is "indefinite" because "it does not specify toward what the activation is" and that "[t]he express disclosure is clearly limited to the sigma[*] value recited in claim 1, for example: see [(A] and [B]]."

In affirming the examiner on these rejections, the board stated:

> Further, claims 64 and 68-72 stand finally rejected under 35 U.S.C. 112 as being broader than the enabling disclosure (first paragraph) and broader than the express limitations disclosed as defining the invention (paragraph two).

It is the Examiner's position that "to activate a halogen atom" (claim 64) is indefinite and that the disclosure also is limited to dihalobenzenoid compounds not broadly merely "activated by an inert electron withdrawing group" (claims 68-72) but the activation must have a sigma* value above about +0.7.

We agree with this rejection. The specification makes it quite clear that a minimum sigma* activation value of the halogen atoms is required (note especially [(A]]) and an undefined sigma* value thus lacks the requisite preciseness commensurate with the enablement of the disclosure.

Opinion

1. The Rejections of Claims 64 and 68-72 under §112

Claims 64 and 68-72 were rejected under both the first and second paragraphs of 35 USC 112.

[1] We begin with the rejections under the second paragraph of §112. As stated in In re Moore, 58 CCPA 1042, 1046-1047, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (1971):

> Any analysis in this regard should begin with the determination of whether the claims satisfy the requirements of the second paragraph. • • •
>
> This first inquiry therefore is merely to determine whether the claims do, in fact, set out and circumscribe a particular area with a reasonable degree of precision and particularity. It is here where the definiteness of the language employed must be analyzed — not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. [Footnote omitted.]

The examiner's §112, second paragraph, rejection was premised on the general ground that the claims are "broader than the express limitations disclosed as defining the invention" and on two specific grounds: (a) that the expression "to activate a halogen atom" is "indefinite" because "it does not specify toward what the activation is;" and (b) that "[t]he express disclosure is clearly limited to the sigma[*] value recited in claim 1, for example: see [(A] and [B]]." The board affirmed and stated: "an undefined sigma* value thus lacks the requisite *preciseness* • • •." (Emphasis added.)

An application for patent *for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States* by the same inventor shall have the same effect, *as to such invention*, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or on an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application. [Emphasis added.]

" §112. Specification.

The specification shall contain *a written description of the invention*, and of the manner and process of making and using it, *in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same*, and shall set forth the best mode contemplated by the inventor of carrying out his invention. [Emphasis added.]

" §112. Specification.

• • •

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Ground (a) focuses on the specific phrase "to activate a halogen atom." But the language is found only in claim 64, not in claims 68-72. Claim 68 recites "a dihalobenzenoid compound having halogen atoms activated by an inert electron withdrawing group," and claims 71 and 72 have a similar recitation. (Claims 69 and 70 depend from claim 68.) Those recitations clearly specify "toward what the activation is," as the examiner would require. Ground (a), therefore, lacks merit with respect to claims 68-72.

[2] Product claim 64[*] defines the complete polymer structure by describing the constituents partially in terms of their functions in the reaction and by their linkage into the end-product polymer. The specification provides further guidance on the meaning of the E' term:

> It is seen also that as used herein, the E' term defined as being the "residuum of the benzenoid compound" refers to the aromatic or benzenoid residue of the compound *after the removal of the halogen atoms on the benzenoid nucleus.* [Emphasis added.]

It is also clear from the specification as a whole, that two keys to the polymerization reaction are inert electron withdrawing groups particularly positioned on the benzenoid nucleus and a cumulative sigma* value attributable to those withdrawing groups which is sufficient to activate a halogen atom on that nucleus. If the sigma* value is not sufficient to activate a halogen atom on the benzenoid nucleus, the reaction will not take place and the polymer will not be made. See In re Angstadt, 537 F.2d 498, 190 USPQ 214 (CCPA 1976). The specification adequately details which sigma* values are sufficient to carry out the reaction, and any person skilled in the art would immediately recognize from the above-quoted portion of the disclosure or the specification as a whole that the halogen atom mentioned in claim 64 was on the benzenoid nucleus prior to the reaction. It is clear that those skilled in the art would have no trouble ascertaining whether any particular polymer falls within the scope of claim 64. See In re Goffe, 526 F.2d 1393, 188 USPQ 31 (CCPA 1975). The questioned limitation is merely surplusage, since the claim would be definite with or without it.[**]

[3] The point made by the board, that "an undefined sigma* value" lacks "preciseness," is also unsound.[**] Claim language must be read in light of the specification as it would be interpreted by one of ordinary skill in the art. In re Moore, supra. As pointed out above, those skilled in the art will be able to determine immediately from appellants' detailed specification what level of activation (i.e., sigma* value) is necessary to practice the invention. Cf. In re Mattison, 509 F.2d 563, 184 USPQ 484 (CCPA 1975). We conclude that the subject matter embraced by claims 64 and 68-72 is definite and that the claims set out and circumscribe a particular area with a reasonable degree of precision and particularity. In re Angstadt, supra; In re Skoll, 523 F.2d 1392, 187 USPQ 481 (CCPA 1975); In re Watson, 517 F.2d 465, 186 USPQ 11 (CCPA 1975); In re Moore, supra. Therefore, the rejection of claims 64 and 68-72 under the *second* paragraph of 35 USC 112 is reversed.

[4] The examiner's general ground and his ground (b) raise a lack of enablement issue properly arising under the *first*, not the second, paragraph of §112. Ground (b) simply supplies the examiner's reasoning in support of the rejection of the claims under §112, first paragraph, as "broader than the enabling disclosure."

As appellants state, the crux of this lack of enablement rejection is that although the specification describes how the halogen atoms bonded to the dihalobenzenoid compound (the E' precursor compound) must be activated in order for polymerization to occur, the claims at issue do not recite a numerical definition of the degree of activation (a minimum sigma* value) required from the electron withdrawing group. The PTO position is that the claims must recite a minimum sigma* value in order to conform the scope of the claims to the scope of enablement provided by the specification. The PTO relies on statements [A] and [B] to prove that the scope of enablement provided by the specification is not commensurate with the scope of the claims.

[5] First, we note that it is the function of the specification, not the claims, to set forth the "practical limits of operation" of an invention. In re Rainer, 49 CCPA 1243, 1248, 305 F.2d 505, 509, 134 USPQ 343, 346 (1962). One does not look to claims to find out how to practice the invention they define, but to the specification. In re Roberts, 470 F.2d 1399, 1403, 176 USPQ 313, 315 (CCPA 1973); In re Fuetterer, 50 CCPA 1453, 319 F.2d 259, 138 USPQ 217 (1963).

[6] Second, we note that the specification *as a whole* must be considered in determining whether the scope of enablement provided by the specification is commensurate with the scope of the claims. In re Moore, supra at 1047, 439 F.2d at 1235, 169 USPQ at 238-39.

The present specification includes broad statements such as: "Any electron withdrawing group can be employed as the activator group in these compounds." The specification also discusses preferred embodiments, alternative embodiments, and the practical limits of operation.

Statement [A] describes preferred embodiments and practical limits of operation. It says that electron withdrawing groups having a high sigma* value ("preferably above 1.0") are preferred and that the practical limit of operation of the polymerization reaction is reached when the electron withdrawing group has a sigma* value of 0.7 (at that value the reaction rate "may be somewhat low").

Statement [B] describes an alternative embodiment ("a plurality of electron withdrawing groups") and the practical limit of operation for this embodiment. It states that the cumulative sigma* influence should be "at least about +0.7."

[7] The PTO would limit appellants to claims reciting a sigma* value of at least 0.7. This view is improper because it requires the claims to set forth the practical limits of operation for the invention and it effectively ignores the scope of enablement provided by the specification as a whole. As we said in In re Goffe, 542 F.2d 564, 567, 191 USPQ 429, 431 (CCPA 1976):

> [T]o provide effective incentives, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he has found will work or to materials which meet the guidelines specified for "preferred" materials in a process such as the one herein involved would not serve the constitutional purpose of promoting progress in the useful arts. See In re Fuetterer, 50 CCPA 1453, 1462, 319 F.2d 259, 265, 138 USPQ 217, 223 (1963). [Footnote omitted.]

The rejection of claims 64 and 68-72 under the *first* paragraph of 35 USC 112 is reversed.

II. The Rejection of Claims 1-9, 64, and 68-70 Under §102 or §103, Raising Issues Under §112 and §120

[8] We are convinced that the invention recited in claim 1 is "disclosed in the manner provided by the first paragraph of section 112" in the 1963 application and that claim 1[*] is therefore entitled to the benefit of the 1963 filing date.[**] The only inquiry is whether, after exclusion from the original claims of two species specifically disclosed in the 1963 application, the 1963 disclosure satisfies §112, first paragraph, for the "limited genus"[**] now claimed.

While the board found that "no antecedent basis exists in the parent case" for the "limited genus" in claim 1, we see more than ample basis for claims of such scope. The 1963 disclosure is clearly directed to polymers of the type claimed. Fifty specific choices are mentioned for the E precursor compound, a broad *class* is identified as embracing suitable *choices* for the E' precursor compound, and twenty-six "examples" are disclosed which detail fifteen species of polyarylene polyethers. Only fourteen of those species and twenty-three of the "examples" are within the scope of the claims now on appeal. Two of the many choices for E and E' precursor compounds are deleted from the protection sought, because appellant is *claiming less* than the full scope of his disclosure. But, as we said in In re Wertheim, 541 F.2d 257, 263, 191 USPQ 90, 97 (CCPA 1976):

> Inventions are constantly made which turn out not to be patentable, and applicants frequently discover during the course of prosecution that only a part of what they invented and originally claimed is patentable.

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[*] Claims 68-70 are product-by-process claims.

[**] We do not speculate on whether or not the claim would be unduly broad if the questioned limitation were removed. But undue breadth is not indefiniteness. In re Borkowski, 57 CCPA 946, 422 F.2d 904, 164 USPQ 642 (1970). This claim is definite either with or without the phrase "to activate a halogen atom."

[**] In re Merat, 519 F.2d 1390, 186 USPQ 471 (CCPA 1975), cited by the Solicitor, affirmed a §112, second paragraph, rejection because the same word ("normal") was used in the claims in one sense and in the specification in a different sense, thus rendering the claims indefinite. There is nothing akin to the Merat situation here.

[*] Appellants have not argued the claims separately, thus, claims 2-9, 64, and 68-70 stand or fall with claim 1.

[**] Appellants refer to the subject matter recited in claim 1 as a "limited genus." The board called it an "artificial subgenus." We use appellants' terminology. Whatever the label, the issue is the same.

[9] It is for the inventor to decide what *nds* of protection he will seek. In re unders, 58 CCPA 1316, 1327, 444 F.2d 9, 607, 170 USPQ 213, 220 (1971). To ny appellants the benefit of their grandrent application in this case would, as this art said in Saunders:

• • • let form triumph over substance, substantially eliminating the right of an applicant to retreat to an otherwise patentable species merely because he erroneously thought he was first with the genus when he filed.

The board cited as "controlling" the isions of this court in In re Welstead, 59 PA 1105, 463 F.2d 1110, 174 USPQ 449 72); In re Lukach, 58 CCPA 1233, 442 d 967, 169 USPQ 795 (1971); and In re ith, 59 CCPA 1025, 458 F.2d 1389, 173 PQ 679 (1972). Those decisions, because important factual distinctions, are not trolling.

n Welstead the applicant was attempting ntroduce into his claims a new subgenus ere "• • • the specification • • • conied neither a description • • • of the ogenus] • • • nor descriptions of the cies thereof amounting in the aggregate he same thing • • •." Welstead conced- the absence from his disclosure of comnds of the "second type" within the new genus. Welstead is thus clearly disuishable from the present case, in which ellants' grandparent application cons a broad and complete generic disure, coupled with extensive examples ' supportive of the limited genus now ned. Indeed, Welstead might have well n cited by the board in support of a deci- contrary to that reached, in view of t this court there implied concerning the ibility that "descriptions of species unting in the aggregate to the same g" may satisfy the description reements of 35 USC 112, paragraph one.

milarly, in Lukach we noted that ' • the grandparent application here not disclose any defined genus of which resently claimed copolymers are a subts." That is not the fact here. ellants' grandparent application clearly ribes the genus and the two special es of polymer materials excluded from.

Smith the applicant sought the benefit s prior application for a broadened ic claim, replacing the claim limitation east 12 carbon atoms • • •" with a imitation calling specifically for 8 to 36 n atoms, where there was no disclosure of either the range itself or of a sufficient number of species to establish entitlement to the claimed range. Appellants, in contrast to the applicant in Smith, are narrowing their claims, and the full scope of the limited genus now claimed is supported in appellants' earlier application, generically and by specific examples.

[10] The notion that one who fully discloses, and teaches those skilled in the art how to make and use, a genus and numerous species therewithin, has somehow failed to disclose, and teach those skilled in the art how to make and use, that genus minus two of those species, and has thus failed to satisfy the requirements of §112, first paragraph, appears to result from a hypertechnical application of legalistic prose relating to that provision of the statute. All that happened here is that appellants narrowed their claims to avoid having them read on a lost interference count.

[11] The board indicated that "it is manifestly immaterial" *why* appellants limited their claims. Though it is true that insufficiency under §112 could not be cured by citing the causes for such insufficiency, it is not true that the factual context out of which the question under §112 arises is immaterial. Quite the contrary. Here, as we hold on the facts of this case, the "written description" in the 1963 specification supported the claims in the absence of the limitation, and that specification, having described the whole, necessarily described the part remaining. The facts of the prosecution are properly presented and relied on, under these circumstances, to indicate that appellants are merely excising the invention of another, to which they are not entitled, and are not creating an "artificial subgenus" or claiming "new matter."

In summary, and for the reasons discussed, the rejections of claims 64 and 68-72 under §112, first and second paragraphs, are reversed; appellants' 1963 disclosure satisfied §112, first paragraph, with respect to claims 1-9, 64, and 68-70 and appellants are, therefore, entitled to the benefit of their 1963 filing date under 35 USC 120. The Netherlands patent is thus rendered unavailable as a prior art reference, and the rejection of the claims under 35 USC 102 or 103 is reversed.

Lane, Judge, dissenting in part,

I would affirm the rejection of claims 64 and 68-72 under §112, paragraphs 1 and 2, because the specification indicates that a minimum sigma value of +0.7 is an *essential requisite*. These claims fail to recite this requisite, thus fail to define appellants' invention and are broader than the disclosure. I concur in reversing the rejection of claims 1-9.

U.S. Court of Claims

Finney v. United States

No. 297-72 Decided Apr. 16, 1976

PATENTS

1. Infringement — In general (§39.01)

Single instance of experimentation with patented device by accused infringer is de minimis; inventor cannot complain of unauthorized experiment with his invention on modest scale if practical use does not follow.

Particular patents — Interlocking Gloves

3,368,811, Finney, Interlocking Glove and Handle, not infringed.

Petition by Basil B. Finney, against the United States, for compensation for use of an invention. On plaintiff's exception to recommended decision, and request for review, and defendant's motion for judgment. Judgment for defendant.

Adopting 188 USPQ 33; see also 178 USPQ 235 and 183 USPQ 351.

Basil B. Finney, Riverside, Cal., pro se.

Robert H. Plotkin and Carla A. Hills for defendant.

Before Cowen, Chief Judge, and Nichols and Kunzig, Judges.

Per curiam.

Plaintiff, Basil B. Finney, brought this suit under 28 U. S. C. Sec. 1498, to recover reasonable and entire compensation for infringement by National Aeronautics and Space Administration (NASA) of plaintiff's patent No. 3,368,811. Trial Judge Colaianni has filed a recommended decision and conclusion of law in accordance with Rule 134(h). The plaintiff has filed pro se his exception and request for review. Upon consideration of this, and of defendant's motion for judgment, but without oral argument, the court agrees with the recommended decision, which has been furnished to the parties, and adopts the same as the basis for its judgment in this case. There was, therefore, no infringement, and the issue of invalidity is not addressed.

[1] The invention teaches a method for constructing an interlocking glove and handle, enabling a secure, nonslip grasp of a handle or control wheel. Velcro, a trademarked material, may be applied to both glove and handle, with numerous hooks protuding from one surface and loops of thread from the other. Plaintiff on a tour of the NASA Center in Houston, Texas, in 1970, saw a gloved mannequin holding an airgun, the glove and gun being treated with Velcro in the patented manner. However, this mannequin was believed to depict a Gemini IV Mission astronaut. The Gemini IV mission was run on June 3-7, of 1965, three years before the patent date, and according to testimony, did not actually employ Velcro. The evidence was specific and overwhelming that, with one exception, NASA made no use of the invention. The exception is that in a single instance NASA designed and built a Modular Equipment Transporter (MET), sort of a glorified wheelbarrow, for use on the moon. It was tried (on earth) with Velcro non-skid material on the handles and on the astronaut's gloves, but this MET was rejected for another design, not using Velcro, that was actually used on the moon. Plaintiff makes much of this single instance, but the trial judge properly rejects it as de minimis. Maxon Premix Burner Co. v. Eclipse Engineering Co., 471 F.2d 308, 317, 175 USPQ 324, 330 (7th Cir. 1972), cert. denied, 410 U.S. 929, 176 USPQ 513 (1973). (Manufacture and sale of a single experimental prototype held de minimis.) An inventor cannot complain of experiment with his invention of this modest scale, when it is not followed by practical use. Plaintiff believes this experimental MET embodying his invention is still in Government storage somewhere, and so it well may be, but there is nothing to suggest it is stored for actual use, on the moon or elsewhere.

Accordingly, the plaintiff is not entitled to recover and the petition is dismissed.

Court of Customs and Patent Appeals

In re Herschler

No. 78-548
Decided Feb. 1, 1979

PATENTS

1. Affidavits — In general (§12.1)

Patent and Trademark Office's physical possession of original affidavit at time of Board of Appeals' decision makes further verification unnecessary.

2. Applicants for patent — In general (§14.1)

Pleading and practice in Patent Office — Rules effect (§54.9)

Inventorship of great-grandparent application was not effectively amended by Patent and Trademark Office's acquiescence in accepting sole inventorship of grandparent, nor was great-grandparent amended nunc pro tunc by submission of copies of Rule 45 papers.

3. Specification — In general (§62.1)

Specification — Claims as disclosure (§62.3)

Specification — Sufficiency of disclosure (§62.7)

Function of description requirement is to ensure that inventor had possession, as of filing date of application relied upon, of specific subject matter later claimed by him; how specification accomplishes this is not material; claimed subject matter need not be described in haec verba to satisfy description requirement, it is not necessary that application describe claim limitations exactly, but only so clearly that one having ordinary skill in pertinent art would recognize from disclosure that applicant invented processes including those limitations.

4. Specification — Sufficiency of disclosure (§62.7)

Written description of class of compounds must provide measure of predictability for utility described for that class.

5. Pleading and practice in Patent Office — Rejections (§54.7)

It is incumbent, in first instance, for Patent and Trademark Office to give reasons why written description is insufficient.

6. Specification — Sufficiency of disclosure (§62.7)

Known steroids, when considered as class of compounds carried through layer of skin by DMSO, is not so large that single example in specification could not describe varied members with their further varied properties.

7. Specification — Sufficiency of disclosure (§62.7)

Court of Customs and Patent Appeals maintains line first clearly drawn in In re Fuetterer, 138 USPQ 217, where it found written description requirement to be satisfied where claims were drawn to rubber stock composition useful in producing tire treads, included recitation of inorganic salt capable of maintaining homogeneous distribution of another component in composition, and disclosure listed function described and four members of class having that function.

8. Claims — Specification must support (§20.85)

Specification — Sufficiency of disclosure (§62.7)

Principles stated in In re Driscoll, 195 USPQ 434, In re Ruschig, 154 USPQ 118, and In re Fried, 136 USPQ 429, concerning application with claims either to intermediate classes of new compounds per se or claims drawn to processes using those new compounds are still alive and well.

9. Specification — Sufficiency of disclosure (§62.7)

Claims drawn to use of known chemical compounds in manner auxiliary to invention must have corresponding written description only so specific as to lead one having ordinary skill in art to that class of compounds; occasionally functional recitation of those known compounds in specification may be sufficient as that description.

10. Patentability — Evidence of — State of art (§51.467)

Papers presented to New York Academy of Sciences could, where there is prima facie showing of obviousness to rebut, if properly presented, indicate wide-scale acceptance in art and provide secondary consideration capable of overcoming 35 U.S.C. 103 rejection.

Particular patents — Tissue Penetration

Herschler, Enhancing Tissue Penetration of Physiologically Active Steroidal Agents with DMSO, rejection of claims 1-5 and 9-13 reversed.

Appeal from Patent and Trademark Office Board of Appeals.

Application for patent of Robert J. Herschler, Serial No. 304,283, filed Nov. 6, 1972, division of application, Serial No. 69,155, filed Sept. 2, 1970, continuation-in-part of application, Serial No. 753,231, filed Aug. 16, 1968, continuation-in-part of application, Serial No. 329,151, filed Dec. 9, 1963. From decision rejecting claims 1-5 and 9-13, applicant appeals. Reversed.

Stanley M. Teigland, San Francisco, Calif., for appellant.

Joseph F. Nakamura (Fred W. Sherling and Ernest G. Therkorn, of counsel) for Commissioner of Patents and Trademarks.

Before Rich, Baldwin, and Miller, Associate Judges, and Kashiwa,* and Ford,** Judges.

Baldwin, Judge.

This appeal is from the decision of the Patent and Trademark Office (PTO) Board of Appeals (board) affirming the rejection of claims 1-5 and 9-13 in appellant's application serial No. 304,283,[1] filed November 6, 1972, for "Enhancing Tissue Penetration of Physiologically Active Steroidal Agents with DMSO."[2]

The board affirmed the examiner's rejection of all claims under 35 USC 103 as unpatentable over Lubowe in view of Faust, Marson or Brown. The board also affirmed a rejection, first entered pursuant to its authority under 37 CFR 1.196(b),[3] of each of the claims under 35 USC 102(b) or 103 over Stroughton et al., Stroughton or Kligman.[4] We reverse.

The Invention

The appellant has found that DMSO enhances the penetration of a number of materials through skin tissue. In the application at hand, a mixture of DMSO and a "physiologically active steroidal agent" is administered to skin (or a mucous membrane) with the result that the steroid penetrates the membrane. The claimed process provides such advantages as the elimination of injection by needle and the ability to administer localized doses of the drug without resort to a systemic dose.

Claim 1 is typical of the invention:

1. A method of enhancing the penetration into and across an external membrane barrier of a human or animal subject of a physiologically active steroidal agent capable of eliciting a physiological effect upon topical application thereof, which comprises the concurrent topical administration to the external membrane of an amount of said steroidal agent effective to produce the desired physiological effect and an amount of DMSO sufficient to effectively enhance penetration of said steroidal agent to achieve the desired physiological effect.

The Prior Art

The following references were relied upon to support the rejection under §103:

Lubowe Patent No. 2,942,008 issued on June 21, 1960.

Brown et al., "A Note on the Toxicity and Solvent Properties of Dimethyl Sulfox-

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* The Honorable Shiro Kashiwa of the United States Court of Claims, sitting by designation.

** The Honorable Morgan Ford of the United States Customs Court, sitting by designation.

[1] This application is a division of serial No. 69,155, filed September 2, 1970, now U.S. 3,711,606, which in turn is a continuation-in-part of serial No. 753,231, filed August 16, 1968, now U.S. 3,551,554, which is a continuation-in-part of application serial No. 329,151 (hereafter the "great-grandparent"), filed December 9, 1963, now abandoned.

[2] Dimethyl sulfoxide (hereinafter DMSO) is a water-clear, water-miscible, hygroscopic, neutral organic liquid, melting at about 18°C. and boiling at about 189°C. It is a well-known industrial solvent represented by the following formula:

[3] 37 CFR 1.196(b) provides, in pertinent part, that:

> (b) Should the Board of Appeals have knowledge of any grounds not involved in the appeal for rejecting any appealed claim, it may include in its decision a statement to that effect with its reasons for so holding, which statement shall constitute a rejection of the claims.

[4] These references were not part of the certified record transmitted to the court. However, appellant admits in his brief that the rejection is proper *if* the great-grandparent lacks a written description of the invention in issue. The contents of the references need not be considered.

ide." 15 J. Pharm. Pharma. Col. 688-692 (Oct. 1963).
Faust. "Some New Components for Cosmetic and Dermatologic Vehicles," 77 American Perfumer 23-26 (Jan. 1962).
Marson. "Il Dimetilsolfossido Solvente Aquo-Mimetico," 102 Boll. Chimicofarm. 109-124 (Feb. 1963).

Lubowe is a patent directed to compositions with large amounts of mineral, vegetable or animal oils solubilized in short chain alcohols. The oils are maintained in solution by the addition of fatty alcohols having 10 to 24 carbon atoms. The resulting compositions may be used as a base in a number of further cosmetic and pharmaceutical compositions. When the composition is used in a hair lotion, Lubowe indicates that "estrogenic hormones, methyl sulfoxide" may be added. Example XII shows a hair lotion containing 0.1% estrogenic hormone in 50% ethyl alcohol but without DMSO.

Brown et al. shows DMSO to be a solvent in which many classes of compounds are soluble and, further, is of low toxicity.

Faust suggests that DMSO is a "safe and effective solubilizing" agent suitable for use as a cosmetic or dermatologic vehicle.

Marson cites Faust saying "the cosmetic literature has recently cited its [DMSO's] employment as simple, non-gelated components of dermatological vehicles" and describes the usefulness of DMSO in preparing pharmaceutical compositions containing, inter alia, the thickening agents such as recited in the claims.

Background

The examiner indicated in the Final Rejection and in his Answer that the claims were rejected under 35 USC 103 since "the Lubowe patent describes, inter alia, DMSO added to Ex. XII, an anti-seborrheic hair lotion containing 1/10 part by weight of estrogenic hormone," and that, "we have, inherently, the same process involved here as described in Lubowe, notwithstanding applicant's observation of percutaneous absorption from the DMSO (apparently added as a vehicle or solvent, according to Faust, Marson or Brown)."

The board, in a first opinion, agreed with the Examiner's position and amplified it, stating:

> We note that the secondary references make it clear that DMSO is an effective solubilizing agent for various drugs, including those to be applied topically and along with the examiner we emphasize that ". . . an amount of DMSO sufficient to effectively enhance penetration . . ." of the steroid is also an amount effective for solubilization of the steroid; compare with page 19 of the specification. Therefore, we find that it would be obvious to add DMSO to the steroid containing formulation of Example XII of Lubowe in amounts large enough to enhance penetration of said steroid, in view of the teachings of the secondary references regarding DMSO's utility as a solvent for topical drug formulations.

The board made an additional rejection:

> Under the provisions of 37 CFR 1.196(b) we make new grounds of rejection under 35 USC 102(b) and 35 USC 103 against claims 1 to 5 and 9 to 13.
>
> Claims 1 to 5 and 9 to 13 are rejected under 35 USC 102 and 35 USC 103 as unpatentable over any one of Stoughton et al. Stoughton or Kligman. All of the above publications were made of record by appellant's counsel in Paper No. 6 of great-grandparent case Serial No. 329,151 filed December 9, 1963. The above articles were described in detail by appellant's counsel in said Paper No. 6 (pages 8 to 12) and we will not, therefore, elaborate on the disclosure of the articles. It is sufficient to note that each of the articles teaches the enhanced penetration of various steroids resulting from topical application of DMSO concurrently with the steroid — the heart of appellant's inventive concept. All of the above articles were published in 1964 or 1965, more than one year prior to the filing date of appellant's grandparent case Serial No. 753,231, filed August 16, 1968. Hence the articles are statutory bars against the present claims under 35 USC 102(b) and 103 *unless* appellant's claimed invention was described in great-grandparent case Serial No. 329,151 filed December 9, 1963: see 35 USC 120 and 35 USC 112, first paragraph.
>
> We have carefully considered the great-grandparent case but the only disclosure relating to steroids (pages 34-35) is limited to glucocorticosteroids whereas *all* of the present claims on appeal are drawn either to steroids in general or to steroids not limited to glucocorticosteroids (claims 4-5). It is now well settled law that disclosure of a species is insufficient to provide descriptive support for a generic or sub-generic claim: In re Ruscetta et al, 45 CCPA 968, 255 F.2d

687, 118 USPQ 101 (1958), In re Lukach, 58 CCPA 1233, 442 F.2d 967, 169 USPQ 795 (1971) and In re Smith, 59 CCPA 1025, 458 F.2d 1389, 173 USPQ 679 (1972).

Hence, appellant may not rely upon his great-grandparent case to support any of the claims on appeal and thus the above articles are prior art and can be properly applied against the claims under 35 USC 102(b) and 103. We note also that the great-grandparent case was filed in the name of Jacob and Herschler, whereas the present case was filed by Herschler alone.[*] Since the inventive entities are different, we do not see how appellant can claim priority under 35 USC 120 based upon the great-grandparent case; note the requirement that the applications be ". . . filed by the same inventor . . . ."

[Emphasis in original.]

Appellant thereupon submitted a Request for Reconsideration accompanied by two attachments and requested that the examiner consider them. The first attachment was a portion of a 508 page collection of papers given at a conference entitled Conference on Biological Actions of Dimethyl Sulfoxide held by the New York Academy of Sciences in 1974. The second enclosure was a copy of a Rule 45 declaration[*] submitted in the great-grandparent application purporting to amend the inventorship from Jacob and Herschler joint to Herschler sole.

In support of the Rule 45 affidavit, appellant argued:

> With respect to the first reason, submitted herewith are copies of papers filed under Rule 45 in the great-grandparent application, and a copy of a postcard receipt indicating that the papers were received by the Patent Office. The papers include an amendment under Rule 45 to change the inventorship of the great-grandparent application to correspond to the inventorship of this application. No notice was received that entry of the amendment was refused. Moreover, the Rule 45 papers were filed simultaneously with a continuing application in the name of the new inventorship and the Patent Office accorded continuation-in-part status to the application, which issued as U.S.P. 3,551,554. Hence, it is evident that the examiner considered the papers filed under Rule 45 and acknowledged that they were legally sufficient to change the inventorship. However, if the examiner believes it is necessary to formally change the inventorship of the great-grandparent application, he is invited to enter the Rule 45 amendment nunc pro tunc.

Appellant further argued that the written description in the great-grandparent was adequate for the subgenus now claimed:

> As clearly indicated in the great-grandparent application, appellant recognized from the start that the invention was applicable to physiologically active agents in general. * * * Thus, the Board's contention that "the only disclosure [in the great-grandparent application] relating to steroids is limited to glucocorticosteroids" is incorrect. The great-grandparent application discloses that the invention is applicable to the genus of physiologically active agents, which includes the important subgenus of steroids. A working example illustrates practice of the invention with a corticosteroid, which, of course, is a species of the subgenus of steroids. Hence, the great-grandparent application, in teaching the applicability of the invention to the genus of physiologically active agents in general, and to the species corticosteroids in particular, quite naturally describes to one skilled in the art the applicability of the invention to the subgenus of steroids. Since a corticosteroid is obviously a type of steroid, and since the word "corticosteroid" contains the very word "steroid", the corticosteroid in the working example, in view of the applicability of the invention to physiologically active agents in general, clearly represents to one skilled in the art the subgenus of steroids. There is no other subgenus that it would reasonably represent.

[*] Rule 45(b) of the Rules of Practice in Patent Cases provided, at the time of the affidavit in issue (1965), that:

> (b) If an application for patent has been made through error and without any deceptive intention by two or more persons as joint inventors when they were not in fact joint inventors, the application may be amended to remove the names of those not inventors upon filing a statement of the facts verified by all of the original applicants, and an oath or declaration as required by rule 65 by the applicant who is the actual inventor, provided the amendment is diligently made. Such amendment must have the written consent of any assignee.

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The collection of papers submitted to the New York Academy of Sciences was said to demonstrate that "in view of the interest in DMSO generated by appellant's discovery, as shown by this reference, the discovery was truly a pioneering breakthrough in medical science." And further, that the papers describing work by:

> Kligman and others with just a few different species of steroids [show], that DMSO enhances the penetration of steroids in general. This same conclusion would similarly be drawn by one skilled in the art from the disclosure in appellant's great-grandparent application. Thus, the great-grandparent application describes to one skilled in the art the invention claimed in this application.

The board remanded the application to the examiner for consideration of the appended paper. In a supplemental Answer, the examiner stated:

> The Examiner respectfully declines the invitation to either now enter, nunc pro tunc, in an abandoned application, or to even consider what precisely Stanley Jacob did, or not, co-invent, in unverified copies of submitted purported Rule 45 amendment papers, which papers, even if not untimely, are unclear: ("various embodiments", "several additional embodiments", "I was informed on July 18, 1968 that I was not a coinventor", etc.), and considers them not relevant or sufficiently precise to any specific issues herein of whether or not he did not in fact co-invent the applicable portions of S.N.329,151, filed jointly with him, which relate to DMSO topically applied with a species of glucocorticosteroid * * *. [Furthermore, the board expressly states that] "we have carefully considered.", but they found, (and appellant has not denied,) that its only disclosure relating to steroids (pages 34-35) is limited to the single species of glucocorticosteroids, whereas *all* of the present claims on appeal are drawn either to steroids in general, or to steroids not limited to glucocorticosteroids (claims 4-5), and the Board of Appeal [sic] held it to be now well settled law that disclosure of a species is insufficient to provide descriptive support for a generic or sub-generic claim, citing the Ruscetta et al, Lukach and Smith decisions. Assuming, arguendo, that the precise inventorship of said glucocorticosteroid species and DMSO is established as not involving a different inventorship question; the question remains, for review under 35 USC 141 or 145, where, in S.N. 329,151, is described the steroid genus or subgenus, now claimed? [Emphasis in original.]

The application was then returned to the board. Appellant filed another request for reconsideration reiterating the comments and arguments made in the earlier request.

The board's final opinion indicated that:

> We agree with the Examiner that the unverified and unclear papers purportedly filed under 37 CFR 1.45 do not establish that the inventorship of 329,151 and that of the instant case are the same.
>
> We have carefully reconsidered our new ground of rejection under 35 USC 102(b) and 103 over the newly cited art but we are convinced that the rejection is sound. Apart from the different inventive entities of 329,151 and the instant case we remain of the view that there is no description [in] 329,151 of the process as applicable to steroids. In In re Smith, 178 USPQ 620 (1973), there was also a description in the parent case of a broad genus and a particular species, yet the CCPA held that there was insufficient descriptive support for a subgeneric claim similar to the present subgenus claims drawn to steroids. We do not see how an article published in 1974 or 1975 can aid appellant in overcoming the deficiencies in disclosure of an application filed December 9, 1963. The fact remains that nowhere in Serial No. 329,151 is there any mention of the term "steroids," let alone a description of the claimed process as applicable to steroids as a class.
>
> We reiterate our position that claims 1 to 5 and 9 to 13 are obvious over Lubowe in view of any one of Faust, Marson or Brown under 35 USC 103. We do not agree with appellant that it would not be obvious to solubilize steroids (such as the estrogenic hormone in Example XII of Lubowe) with DMSO. As explained by the Examiner in his answer, the secondary references make it clear that DMSO is an effective solubilizing agent for various drugs, including those to be applied topically. We emphasize again that ". . . an amount of DMSO sufficient to effectively enhance penetration . . ." of the steroid is also an amount effective for solubilization of the steroid. We therefore find clear motivation from the teachings of the prior art to solubilize steroids intended for topical application by adding DMSO to steroid formulations in an

amount sufficient to solubilize components of the steroid formulation. The fact that appellant may use DMSO for a different purpose (as compared to the prior art teachings that DMSO solubilizes drugs to be applied topically) does not alter the conclusion that its concomitant use with topically applied drugs such as estrogen would be prima facie obvious from the purpose disclosed in the references; In re Lintner, 173 USPQ 560, 562 (CCPA 1972).

Opinion

35 USC 102(b)/103 Rejection over Stroughton et al., Stroughton or Kligman

As noted above, appellant concedes that the substance of this rejection is proper if the court finds either the great-grandparent application lacks a written description of the instant invention* or the inventorship of the great-grandparent application differs from the one on appeal. The analysis need only consider those two points.

Rule 45 Affidavit

[1] The board found that the "unverified" and unclear papers * * * do not establish that the inventorship of 329,151 and that of the instant case are the same." We do not agree.

Jacob's affidavit indicated that he learned of the invention from the appellant:

> Herschler disclosed at this meeting his conception of the invention of enhancing tissue penetration of physiologically active agents by applying them to animal tissue (both topically and internally) together with DMSO and his reduction to practice of various embodiments of this invention. Herschler requested at this meeting that my group test various additional embodiments of this invention for him.

and that his participation "concerning the invention disclosed and claimed in application Serial No 329,151 was limited to assisting in further testing of the invention with such additional pharmacologically active agents."

Although the affidavit is somewhat vague regarding specific acts done by the affiant, it is quite clear that he derived all information pertinent to the disclosed invention from Herschler and acted only under Herschler's direction. The affidavit is consistent with a finding that Jacob was not an inventor in the great-grandparent application. The accompanying affidavit of Herschler (ratifying the statement of Jacob), in conjunction with the originally filed application papers, leads us to the conclusion that Herschler believes himself to be the inventor of the matter disclosed and claimed in the great-grandparent application.

[2] This is not to say that we agree with appellant that the inventorship of the great-grandparent application was effectively amended by the PTO's acquiescence in accepting the sole inventorship of the grandparent nor do we agree that the great-grandparent was amended nunc pro tunc by the submission of copies of the Rule 45 papers. We consider the affidavits sufficient, for the purpose of claiming priority under §120, to demonstrate that Jacob was joined as a coinventor through error without deceptive intent. Weil v. Fritz, 572 F.2d 856, 196 USPQ 600 (CCPA 1978); In re Schmidt, 48 CCPA 1140, 293 F.2d 274, 130 USPQ 404 (1961).

Written Description in the Great-Grandparent

The appealed claims recite a subgenus, i.e., physiologically active steroidal agents, not found in haec verba in the great-grandparent application.

Appellant emphasizes the following quotation found in the great-grandparent specification and argues that it clearly defines a genus to which the subgenus of steroids belongs:

> By the term "physiologically active substance" is meant any substance which has a demonstrable and desired physiological activity in the sense that animal tissue responds thereto. This may be an altered physiologic phenomenon following heparin administration; a pharmacological activity such as local anesthesia; an antibacterial activity following administration of antibiotics; a bacteriostatic activity following the administration of iodine; a growth stimula-

* We assume, in the absence of any argument to the contrary, that the parent and grandparent applications contain the necessary written description of the invention on appeal. See In re de Seversky, 474 F.2d 671, 177 USPQ 144 (CCPA 1973).

* It is not altogether clear what is meant by "unverified" in referring to the copy of the affidavit submitted to the examiner. The PTO had physical possession of the original affidavit at the time of the board decision as is evidenced by a certified copy thereof in the transcript submitted to the court. Further verification seems unnecessary.

tion activity following usual access to dietary sources, and the like. The term is intended to include any desirable pharmacological action with compounds alien to animal tissue, and any physiological activity with compounds normally occurring in animal tissue. It is also meant to include within the term "physiologically active substance" materials which are diagnostic tools such as radiopaque agents (for instance, iodine), dyes and the like.

That application exemplifies a single species within the terms of claim 1 of this appeal:

Example 30

Penetration of Corticosteroids

A twenty-four year old medical student was seen with atopic dermatitis of the right antecubital fossa. Three cc. of 100% dimethyl sulfoxide were applied four times daily for three days. No benefit was noted. One mg. or 1/4 cc. of Decadron (dexamethasone 21-phosphate) was applied four times a day for two days without benefit. One mg. of dexamethasone 21-phosphate in 3 cc. of 100% dimethyl sulfoxide was painted onto the involved area four times daily for three days. At the end of this period all evidence of the inflammatory reaction had disappeared.

This example shows an improved action of dexamethasone 21-phosphate when used with dimethyl sulfoxide.

No other language in that specification specifically discusses topical application of a steroid-containing composition.

However, the remaining examples are awesome in their diversity. The scope of exemplified "physiologically active substances" includes iodine (Example 1), pressed pellet feed for rats (Example 4), penicillin (Example 10), procaine (Example 16), various chemotherapeutic agents (Examples 17 & 18), barbiturates (Example 19), oral insulin (Example 21), antihistamines (Example 29), various local anesthetics (Examples 34 & 35), etc.

[3] The function of the description requirement is to ensure that the inventor had possession of, as of the filing date of the application relied upon, the specific subject matter later claimed by him; how the specification accomplishes this is not material. In re Smith, 481 F.2d 910, 178 USPQ 620 (CCPA 1973). The claimed subject matter need not be described in haec verba to satisfy the description requirement. In re Smith, 59 CCPA 1025, 458 F.2d 1389, 173 USPQ 679 (1972). It is not necessary that the application describe the claim limitations exactly, but only so clearly that one having ordinary skill in the pertinent art would recognize from the disclosure that appellants invented processes including those limitations. In re Smythe, 480 F.2d 1376, 178 USPQ 279 (CCPA 1973).

The question is simple: does the array of information supplied by appellant in the great-grandparent application teach one having ordinary skill in this art that one of the class of steroids will operate in the claimed process. We conclude that it does.

[4, 5, 6] A toehold on the problem is found in In re Cook, 58 CCPA 1049, 439 F.2d 730, 169 USPQ 298 (1971). The written description of a class of compounds must provide a measure of predictability for the utility described for that class. That is to say: would the worker of ordinary skill in this art consider "steroidal agents" to be operative when considering the great-grandparent's disclosure? It is incumbent, in the first instance, for the PTO to give reasons why he would not. In re Wertheim, 541 F.2d 257, 263, 191 USPQ 90, 98 (CCPA 1976). The solicitor urges that the class of steroids is so large that a single example in the specification could not describe the varied members with their further varied properties. We disagree with this contention. Steroids, when considered as drugs, have a broad scope of physiological activity. On the other hand, steroids, when considered as a class of compounds carried through a layer of skin by DMSO, appear on this record to be chemically quite similar. The diversity of exemplified materials "potentiated" by DMSO in the great-grandparent application, is *much broader* than the diversity of steroid compounds shown contemporaneously in the art.[4] In this instance, we conclude that one having ordinary skill in this art would have found the use of the subgenus of steroids to be apparent in the written description of the great-grandparent application.

Were this application drawn to novel "steroidal agents," a different question would be posed.

[7] We wish to maintain the line first clearly drawn in In re Fuetterer, 50 CCPA 1453, 319 F.2d 259, 138 USPQ 217 (1963).

[4] See, e.g., Kirk-Othmer, "Sterols and Steroids," 12 Encyclopedia of Chemical Technology 917-947 (1st Ed. 1954).

There, claims drawn to a rubber stock composition useful in producing tire treads included a recitation of "an inorganic salt capable" of maintaining an homogeneous distribution of another component in the composition. The disclosure listed the function desired and four members of the class having that function. This court found the written description requirement to be satisfied:

> Appellant's invention is the *combination* claimed and not the discovery that certain inorganic salts have colloid suspending properties. We see nothing in patent law which requires appellant to discover which of all those salts have such properties and which will function properly in his combination. The invention description clearly indicates that any inorganic salt which has such properties is usable in his combination. If others in the future discover what inorganic salts additional to those enumerated do have such properties, it is clear appellant will have no control over them per se, and equally clear his claims should not be so restricted that they can be avoided merely by using some inorganic salt not named by appellant in his disclosure.
>
> We are not persuaded that our conclusion on this point is wrong by decisions of this and other courts relating to the sufficiency of invention disclosures in cases wherein the applicant is claiming chemical *compounds* per se. [Emphasis in original.]

[8] Id. at 1462, 319 F.2d at 265-266, 138 USPQ at 223. Applications with claims either to intermediate classes of *new compounds* per se or claims drawn to processes *using* those *new compounds* have been considered by this court on other occasions. In re Driscoll, 562 F.2d 1245, 195 USPQ 434 (CCPA 1977); In re Ruschig, 54 CCPA 1551, 379 F.2d 990, 154 USPQ 118 (1967); In re Fried, 50 CCPA 954, 312 F.2d 930, 136 USPQ 429 (1963). The principles stated therein are still alive and well.

[9] In sum, claims drawn to the *use* of *known* chemical compounds in a manner auxiliary to the invention must have a corresponding written description only so specific as to lead one having ordinary skill in the art to that class of compounds. Occasionally, a functional recitation of those known compounds in the specification may be sufficient as that description. In Fuetterer and here, such is the case.

35 USC 103 Rejection over Lubowe in view of Faust, Marson or Brown

Throughout the Lubowe patent, DMSO is mentioned only once, and that occurs in the statement that DMSO, as well as many other enumerated compounds, may be added to hair lotion preparations containing a solubilized oil. There is no indication of why the DMSO would be added; nor is there any teaching that there is any relationship between DMSO and estrogenic hormones (which are steroids), let alone a suggestion to employ them in combination. The board relies upon the secondary references to show "that DMSO is an effective solubilizing agent for various drugs, including those to be applied topically" and accordingly finds it obvious to utilize DMSO in Lubowe's Example XII. Such a conclusion is not supported by the record, because, as appellant notes, "the formulation of [Lubowe's] Example XII is already a clear solution containing more solvent than anything else. Moreover, the alcohol solvent employed in Lubowe is also a solvent for steroids." Hence, there would have been no reason for one skilled in the art to add any additional solvent to Lubowe's formulations, particularly a totally different solvent "in any amount large enough to enhance penetration," as required by the claims. Nor would it have been obvious to one skilled in the art to substitute DMSO for a portion of the exemplified alcohols, since Lubowe's invention is directed to the use of specific combinations of alcohols in the disclosed formulations.

While the secondary references may teach that DMSO is generally useful as a solvent, there is no suggestion or teaching in any of them to combine it with a steroid — that is, to choose DMSO from among the countless number of solvents as the solvent for steroids.

[10] Appellant argues that Brown, by stating that DMSO is "not known to interfere with absorption or metabolism," is a teaching not to use DMSO. The solicitor, on the other hand, characterizes the same quotation by saying that "it is not clear how this teaching is a teaching away * * * [and, accordingly] there should be no suprise [sic] that DMSO enhances penetration." Even though that quotation from Brown cannot be said to be an overwhelming suggestion to use DMSO for any solvent-type utility, we do not see how it provides any motivation for one skilled in the art to use DMSO in the formulation of Lubowe. The references do not provide any impetus to do what appellant has done nor do they provide the

art with the knowledge that DMSO enhances penetration of "steroidal agents" through a membrane.'

Summary

We *reverse* the decision of the board, which decision affirmed a rejection of the claims both under 35 USC 102 and 103.

Reversed.

District Court, C. D. California

Bohsei Enterprises Company, U.S.A.
v. Porteous Fastener Company, et al.

No. CV 77-1241
Decided Nov. 16, 1977

TRADEMARKS

1. Fraud and misrepresentation (§67.37)

Court in Alfred Dunhill Ltd. v. Interstate Cigar Co., Inc., 183 USPQ 193, did not decide that omission was not cognizable under Lanham Act.

2. Fraud and misrepresentation (§67.37)

Law of false representation includes omission of material fact of origin that affirmatively says in context in which fasteners are sold "I am a product of the United States"; concern over materiality of such omission particularly in context of imported goods was expressed by Congress when it enacted 19 U.S.C. 1304 requiring imported articles to be "marked in a conspicuous place as legible, indelibly, and permanently as the nature of the article (or container) will permit in such manner as to indicate to an ultimate purchaser * * * the country of origin of the article"; to hold that omission of such material fact is not such false representation as to affect competition of sale to detriment of seller who complies with mandate of 19 U.S.C. 1304 requires utterly naive view of realities of market place; more importantly, it would promote disregard for provisions of 19 U.S.C. 1304; experience has taught courts that concept of private attorney general has been vigorous and needed method for protection of competition under antitrust law; to eschew the justice that experience has shown courts by a judicial narrowing of concept of fraud and deceit since it is embodied in Lanham Act would be pure legal folly and must be rejected.

Action by Bohsei Enterprises Company, U.S.A., against Porteous Fastener Co., Russell, Burdsall & Ward, Inc., Rockford Screw Products of California, Lamson & Sessions, Inc., and ITT Harper, Inc., for Lanham Act violations, and unfair competition. On defendants' motions to dismiss. Motions denied.

Ervin, Cohen & Jessup, Beverly Hills, Calif., for plaintiff.

Thorpe, Sullivan, Workman, Thorpe & O'Sullivan, Los Angeles, Calif., for Porteous Fastener Company.

Sullivan & Cromwell, New York, N.Y., and Lillick, McHose & Charles, Los Angeles, Calif., for Russell, Burdsall & Ward, Inc.

Glad, Tuttle & White, Los Angeles, Calif., for Rockford Screw Products of California.

Thorpe, Sullivan, Workman, Thorpe & O'Sullivan, Los Angeles, Calif., for Lamson & Sessions, Inc.

Powers & Tilson, Los Angeles, Calif., for ITT Harper, Inc.

Real, District Judge.

The defendants have variously moved for dismissal of the action brought by plaintiff. More specifically the motions are:

1. By defendant Rockford Screw Products of California (hereafter Rockford) — Motion for Judgment on the Pleadings.
2. By defendant Russell, Burdsall & Ward, Inc. (hereafter Russell) — Motion to Dismiss.
3. By defendant ITT Harper, Inc., (hereafter ITT) — Motion to Dismiss, Strike and for More Definite Statement.

Plaintiff Bohsei Enterprises Company, U.S.A. (hereafter Bohsei) is in the business

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' We do not find it necessary to reach the question of the weight to be given the papers presented to the New York Academy of Sciences in that appellant has no prima facie showing of obviousness to rebut. Were such a showing appropriate, these papers could, if properly presented, indicate wide-scale acceptance in the art and provide a secondary consideration capable of overcoming a §103 rejection.

ground of abandonment because of non-use of the mark on some of the goods within the scope of the identification in the registration]; and Stanspec Co. v. American Chain & Cable Co., Inc., 531 F.2d 563, 189 USPQ 420, American Chain & Cable Co., Inc., 531 F.2d 563, 189 USPQ 420, 423 n.9 (CCPA 1976), revg 186 USPQ 205 (TTAB 1975) (citing U.S. Steel). But see: Selfway, Inc. v. Travelers Petroleum, Inc., 579 F.2d 75, 198 USPQ 271 (CCPA 1978), affg 195 USPQ 578 (TTAB 1977) [right to concurrent registration may not be determined in the context of a cancellation proceeding].

In view of the above, we believe that applicant may seek partial cancellation of opposer's pleaded registrations. Moreover, it is our view that applicant's counterclaim sufficiently sets forth a claim of abandonment upon which relief can be granted. Accordingly, applicant's motion to amend is granted. Fed. R. Civ. P. 15(a).

Opposer is allowed until thirty days from the date hereof in which to file an answer to the counterclaim. Trademark Rule 2.106(b)(2)(iii).

The parties, between the dates of August 20, 1984 and January 10, 1986, filed numerous consented motions to extend time.[1] These motions are granted.

Applicant has indicated that it does not seek additional discovery relating to the counterclaim. We agree with applicant that opposer should not need additional discovery relating to the counterclaim since all facts relating to the alleged abandonment are within opposer's own knowledge. Moreover, opposer has not requested additional discovery time in the event that the counterclaim was allowed. Accordingly, at such time as opposer's reply to the counterclaim is filed, trial dates, beginning with opposer's testimony period as plaintiff in the opposition, will be rescheduled.

Except to the extent indicated above, proceedings herein are suspended.

Patent and Trademark Office
Board of Patent Appeals and Interferences

Ex parte Sorenson

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[1] The delay in ruling on these extensions and the motion to amend was occasioned by the loss of the opposition file. The parties' cooperation and assistance in recreating the file is appreciated

Appeal No. 640-98

Opinion dated May 28, 1987

PATENTS

1. Patentability/Validity — Adequacy of disclosure [Enablement] (§115.11)

Erroneous use of term "amines," when person having ordinary skill in art would have understood proper term to be "imines," is not sufficient to show that inventor did not have possession of that subject matter.

2. Patentability/Validity — Adequacy of disclosure [Enablement] (§115.11)

Specification disclosure that presented five working examples of binuclear copper complexes of carboxylic acids, as well as pictorial representations thereof, reasonably conveys to skilled artisan that inventor had possession of that subject matter.

Application for patent by John R. J. Sorenson, Method for Treating Convulsions with Organic Copper Compounds, Serial No. 344,309, filed February 1, 1982, continuation of Serial No. 154,132, filed May 29, 1980. From decision refusing to allow claims 25 through 27. Reversed.

Harry C. Jones, III, Jennifer Gordon, and Pennie & Edmonds, New York, N.Y., for appellant.

Before Winters, Steiner, and W. Smith, Examiners-in-Chief.

Winters, Examiner-in-Chief.

Appeal from the examiner's decision refusing to allow claims 25 through 27. Claims 22 through 24 and 36 stand allowed. Claims 28, 31 through 35 and 37 through 39, which are the only other claims remaining in this application, stand objected to as depending from a rejected claim.

Claim 25 is representative:

25. A method of treating convulsive tremors or convulsive seizures comprising administration to mammals of a therapeutically effective amount of an organic compound of copper having anticonvulsive activity selected from copper complexes of imines and binuclear copper complexes of carboxylic acids, or mixtures thereof.

The examiner does not rely on any prior art references. Nor does he set forth a prior art rejection. Rather, the sole issue presented for review is whether the examiner correctly rejected claims 25 through 27 under 35 USC 112, first paragraph, as not adequately supported by a written description in the specification.

OPINION

We shall not sustain this rejection.

Having reviewed the rejection in light of the opposing arguments of record, we agree with appellant that the claimed subject matter is adequately supported in appellant's specification disclosure and, therefore, that the appealed claims comply with 35 USC 112, first paragraph. Essentially, we are in full agreement with the position set forth by appellant in his Brief. We shall therefore adopt that position as our own, adding the following remarks for emphasis only.

The examiner brings to our attention the following recitations in the claims on appeal: (1) "copper complexes of imines", (2) "binuclear copper complexes of carboxylic acids", and (3) "a binuclear copper complex of an aliphatic carboxylic acid or binuclear copper complex of an aryl carboxylic acid". Focusing on the written description requirement of 35 USC 112, first paragraph, the examiner takes the position that those recitations do not appear in appellant's original disclosure and, moreover, that they are not adequately supported by the examples in the specification disclosure.

The examiner does not deny that appellant's specification supports the broad expressions "an organic compound of copper", "copper complexes of carboxylic acids", the "copper complex of an aliphatic carboxylic acid", and the "copper complex of an aryl carboxylic action". Rather, the examiner asserts that appellant's specification disclosure does not support the above-noted, narrower expressions. We recognize that, under certain circumstances, the description requirement of 35 USC 112, first paragraph may operate to defeat the patentability of a narrow but not a broader claim. *In re Smith*, 458 F.2d 1389, 173 USPQ 679 (CCPA 1972). By the same token, we are mindful that appellant's specification need not describe the claimed invention in *ipsis verbis* to comply with the written description requirement. *In re Edwards*, 568 F.2d 1349, 196 USPQ 465 (CCPA 1978). The test is whether the originally filed specification disclosure *reasonably* conveys to a person having ordinary skill that applicant had possession of the subject matter later claimed. *In re Kaslow*, 707 F.2d 1366, 217 USPQ 1089 (Fed. Cir. 1983). By the very nature of the inquiry under this statutory provision, each case turns on its own specific facts. *In re Edwards*, 568 F.2d at 1352, 196 USPQ at 467. As stated in *In re Wilder*, 736 F.2d 1516, 222 USPQ 369 (Fed. Cir. 1984), the inquiry into whether the description requirement is met must be determined on a case by case basis and is a question of fact. Moreover, the examiner has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in appellant's specification disclosure a description of the invention defined by the claims. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

Here, the examiner states that the claim expressions at issue "do not appear in the original disclosure", which means to say that they do not find literal support therein. See the Examiner's Answer, page 2. Further, the examiner states, the expressions "are not adequately supported by the few specific compounds in the specification". Again, see the Examiner's Answer, page 2. Based on those pronouncements, the examiner concludes that appellant's claimed subject matter is not supported by a written description in the specification as filed. Quite clearly, however, the examiner has not met his initial burden of presenting evidence why a person having ordinary skill in the art would not recognize in appellant's specification a description of the invention defined by the claims. *In re Wertheim, supra*. Furthermore, the only reasoning presented which we can discern is an example of *ipse dixit* reasoning, resting on a bare assertion by the examiner.

[1] With respect to the claim recitation "copper complexes of imines", we agree with appellant that his originally filed disclosure reasonably conveys to a person having ordinary skill in the art that he had possession of that subject matter. Although appellant originally used the term "copper complexes of ... amines", we find that the skilled artisan would have understood this to be an inadvertent error and that "copper complexes of imines" was intended. In this regard, note particularly Table VIII of the original disclosure which lists working examples of imines falling within the scope of appellant's invention. Reading the original disclosure as a whole, as we must, we find it clear that "amines" was error, that "imines" was intended, and that this error would have been understood by a person having ordinary skill in the art.

[2] With respect to the claim recitations "binuclear copper complexes of carboxylic acids", a "binuclear copper complex of an aliphatic carboxylic acid", and "a binuclear

copper complex of an aryl carboxylic acid", we again agree with appellant that his originally filed disclosure reasonably conveys to the skilled artisan that he had possession of that subject matter. As pointed out by appellant in his Brief, the specification disclosure as filed presents five working examples of binuclear copper complexes of carboxylic acids. Four of those are representative of a binuclear copper complex of an aryl carboxylic acid and one is representative of a binuclear copper complex of an aliphatic carboxylic acid. Note particularly the pictorial representation in Figure 1, page 7 of the specification as filed. Given those working examples together with the broader disclosure of copper complexes of carboxylic acids, both aliphatic and aromatic, we have no doubt that appellant's disclosure *reasonably* conveys to the skilled artisan that appellant had possession of the subject matter now claimed.

For the reasons stated in appellant's Brief, as amplified above, the examiner's decision refusing to allow claims 25 through 27 is reversed.

REVERSED.

District Court, D. Massachusetts

In re Plastic Bag Production Patent and Antitrust Litigation

MDL No. 705

Decided April 24, 1987

JUDICIAL PRACTICE AND PROCEDURE

1. Jurisdiction — Personal jurisdiction (§405.11)

Nationwide contacts within U.S. by German corporations which are defendants in antitrust action that has been consolidated with patent infringement lawsuit are sufficient to warrant exercise of jurisdiction, but exercise of jurisdiction is not appropriate over German corporation whose only contact with U.S. is ownership of its subsidiary, which in turn owns stock of holding company which in turn owns stock of patent infringement defendant.

Multidistrict consolidated actions by FMC Corporation against Gloucester Engineering Co., SMS Scholoemann-Siemag AG, M. Lehmacher & Sohn GmbH Maschinenfabrik, Reifenhauser GmbH & Co. Maschinenfabrik, Stiegler Maschinenfabrik, Windmoeller & Hoelscher Maschinenfabrik, and Windmoeller & Hoelscher Corporation, for antitrust violations, and against Gloucester Engineering Co., SMS Scholoemann-Siemag AG, and Battenfeld of America Holding Company, for patent infringement. On defendants' motions for protective orders and to dismiss. Motion by defendant SMS Scholoemann-Siemag AG to dismiss granted.

See also 1 USPQ2d 1667.

Paul F. Slater, and Sperling, Slater & Spitz, Raymond P. Niro, Timothy J. Haller, Robert A. Vitale, Jr., and Niro, Scavone, Haller & Niro, all of Chicago, Ill., and Merriann M. Panarella, and Hale & Dorr, both of Boston, Mass., for plaintiff.

Robert H. Riley, and Schiff, Hardin & Waite, both of Chicago, Ill., Orrin M. Haugen, and Haugen & Nikolai, both of Minneapolis, Minn., and William A. McCormack, Stephen J. Crimmons, Jaimie P. Nathanson, and Bingham, Dana & Gould, all of Boston, Mass., for defendants Gloucester Engineering Co., Battenfeld of America Holding Company, and SMS Scholoemann-Siemag AG.

Alan H. Silberman, Zoran Dragutinovich, and Sonnenschein, Carlin, Nath & Rosenthal, all of Chicago, Ill., Thomas G. Slater, Jr., Debbie Seidel, and Hunton & Williams, all of Richmond, Va., and Myron D. Cohen, and Hunton & Williams, both of New York, N.Y., for defendants Windmoeller & Hoelscher Corporation, and Windmoeller & Hoelscher Maschinenfabrik.

Brian W. Bulger, John B. Lashbrook, and Pope, Ballard, Shepard & Fowle, Ltd., all of Chicago, Ill., and Richard P. Ward, and Ropes & Gray, both of Boston, Mass., for defendant M. Lehmacher & Sohn GmbH Maschinenfabrik.

W. David Braun, Deborah H. Bornstein, and Gardner, Carton & Douglas, all of Chicago, Ill., and Lawrence P. Green, Edward N. Perry, and Perkins, Mecsas, Smith, Arata & Howard, all of Boston, Mass, for defendants Reifenhauser GmbH & Co. Maschinenfabrik, and Steigler GmbH Maschinenfabrik.

Mazzone, District Judge.

The plaintiff, FMC Corporation ("FMC"), a Delaware corporation, instituted an antitrust action under Sections 4 and 16 of the Clayton Act, 15 U.S.C. §§15 and 26, in the Northern District of Illinois against Gloucester Engineering Co., Inc. ("Gloucester"), SMS Scholoemann-Siemag AG ("SMS"), M. Lehmacher & Sohn GmbH Maschinenfabrik ("Lemo"), Reifenhauser GmbH & Co. Maschinenfabrik ("Reifenhauser"), Stiegler GmbH Maschinenfabrik ("Stiegler"), Windmoeller & Hoelscher Maschinenfabrik ("W&H Germany"), and Windmoeller & Hoelscher Corporation ("W&H U.S.A."). The plaintiff also filed a claim for patent infringement in the District of Massachusetts against Gloucester, SMS, and a third company, Battenfeld of America Holding Company, Inc. ("Battenfeld").[1] On December 4, 1986, the Judicial Panel on Multidistrict Litigation, pursuant to 28 U.S.C. §1407, transferred the Illinois action to the District of Massachusetts for consolidated pre-trial proceedings.

Four of the seven defendants in the Illinois proceeding, SMS, Lemo, Reifenhauser, and Stiegler, filed motions for protective orders seeking to limit FMC's jurisdictional discovery. FMC opposed those motions in a single brief on November 26, 1986. The four German corporations also have motions pending to dismiss FMC's complaint, primarily on jurisdictional and venue grounds.[2] At the completion of a hearing on February 25, 1987, this Court ordered the plaintiff to respond to the motions to dismiss without further discovery, and to present material illuminating its alleged jurisdictional bases for proceeding with its claims in the Northern District of Illinois. FMC, on March 17, 1987, submitted a memorandum in opposition to the defendants' motions to dismiss accompanied by affidavits of "just some of the persons having knowledge of the defendants' presence in the United States."

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[1] In the patent infringement action in the District of Massachusetts, the plaintiff filed motions for voluntary dismissal without prejudice as to SMS and Battenfeld on September 9, 1986. Battenfeld has filed partial opposition to the motion regarding its dismissal, insofar as the plaintiff seeks dismissal without prejudice. It seeks to dismiss the prejudice. I have allowed the motion to dismiss, and given Battenfeld's remote connection with litigation, have ordered dismissal with prejudice.

[2] Lemo filed a motion to dismiss on September 22, 1986 on the grounds that the Northern District of Illinois lacks personal jurisdiction and that venue is improper. Reifenhauser and Stiegler filed a similar, joint motion on October 6, 1986. SMS filed a motion to dismiss or for summary judgment on October 8, 1986 on the grounds of lack of personal jurisdiction, insufficient process and service of process under the Hague Service Convention, and failure to state a claim. A fifth defendant, W&H Germany, also filed a motion to dismiss, but later withdrew it.

I.

This Court's resolution of the personal jurisdiction and venue issues in this case turns on the question of whether the defendants may be said to have had sufficient "minimum contacts" with the forum such that "maintenance of the suit does not offend 'traditional notions of fair play and substantial justice.'" *International Shoe Co. v. Washington*, 326 U.S. 310, 316 (1945). The parties in this case, though, disagree as to the appropriate test for assessing the "contacts" of foreign defendants. The defendants urge this Court to apply a "local contacts" analysis, one that would assess only the defendants' contacts within the State of Illinois. The plaintiff argues that, in an action brought under the Clayton Act and its nationwide service provision, the Court should adopt a "nationwide contacts" approach and assess the contacts of the defendants throughout the United States.

Since this action was transferred to this Court pursuant to 28 U.S.C. §1407, this Court must apply the substantive law of the transferor forum in resolving the personal jurisdiction and venue issues. The courts of the Northern District of Illinois, however, have failed to embrace one or the other of the contacts tests. In *Coats Co. v. Vulcan Equipment Co.*, 459 F.Supp. 654, 659 [203 USPQ 1060, 1061] (N.D. Ill. 1978), the court cites the case of *Cryomedics, Inc. v. Spembly, Ltd.*, 397 F.Supp. 287, 290 [188 USPQ 255, 258] (D. Conn. 1975) for the proposition that

> When a federal court is asked to exercise personal jurisdiction over an alien defendant sued on a claim arising out of federal law, jurisdiction may appropriately be determined on the basis of the alien's aggregated contacts with the United States as a whole, regardless of whether the contacts with the state in which the district court sits could be sufficient if considered alone.

The Northern District of Illinois, though, declined to adopt this approach in two other cases, *Ingersoll Milling Machine Co. v. J. E. Bernard & Co.*, 508 F.Supp. 907 (N.D. Ill. 1981) and *Sportmart, Inc. v. Frisch*, 537 F.Supp. 1254 (N.D. Ill. 1982). Rulings of the Seventh Circuit Court of Appeals also have not expressed a clear position as to the

cordingly, this counterclaim should also be dismissed.

Conclusion

Auld's motion to dismiss Park Electrochemical's counterclaims is granted in its entirety.[1]

SO ORDERED.

Patent and Trademark Office
Board of Patent Appeals and Interferences

Nelson v. Bowler et al.

Interference No. 101,217

Opinion dated June 19, 1986

Released November 18, 1986

PATENTS

1. **Practice and procedure in Patent and Trademark Office — Interference — Estoppel (§110.1721)**

Doctrine of interference estoppel, which holds that interference settles rights of parties under issues or counts of interferences, also settles every question as to rights to any claim which might have been presented or determined, since doctrine's basic purpose is to insure resolution of priority in single contest respecting all common subject matter disclosed by parties, and it makes no difference that common subject matter may be patentably distinct from count.

2. **Practice and procedure in Patent and Trademark Office — Interference — Estoppel (§110.1721)**

Party who had actual knowledge in previous interference that opposing party had presented instant claims, and was claiming same subject matter during previous interference, cannot now assert that instant counts did not constitute clearly common subject matter

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Patent interference No. 101,217, between Norman A. Nelson, Patent No. 4,303,796, issued December 1, 1981, and Jean Bowler and Neville S. Crossley, application, Serial No. 327,098, filed December 3, 1981, accorded benefit of Serial Nos. 248,717, filed April 28, 1972, 474,608, filed May 30, 1974, now Patent No. 4,321,275, issued March 23, 1982, and British application No. 396/72, filed January 5, 1972. Priority awarded to junior party Nelson.

Lawrence T. Welch, Robert A. Armitage, and Sidney B. Williams, Jr., Kalamazoo, Mich., for Nelson.

Paul N. Kokulis, John W. Malley, Allen Kirkpatrick, David E. Varner, Lloyd J. Street, George T. Mobille, James L. Dooley, Alvin Guttag, Raymond F. Lippitt, G. Lloyd Knight, Carl G. Love, Lawrence A. Hymo, Akin T. Davis, Edgar H. Martin, William K. West, Jr., Kevin E. Joyce, Edward M. Prince, Donald B. Deaver, DAvid W. Brinkman, George M. Sirilla, Fred S. Whisenhunt, Jr., Ralph E. Harper and Robert B. Murray, Washington, D.C., for Bowler, et al.

Before Calvert, Torchin, and Smith, Examiners-in-Chief.

Smith, Examiner-in-Chief.

The interference involves a patent of Nelson, Patent No. 4,303,796, issued December 1, 1981 and assigned to the Upjohn Company, and an application of Bowler et al. (hereafter Bowler), Serial No. 327,098, filed December 3, 1981. Bowler indicates in his brief that his application is assigned to Imperial Chemical Industries Limited.

The subject matter at issue relates to two prostanoic acid derivative compounds. The two counts at issue correspond exactly to claims 4 and 5 of the Nelson patent and to claims 3 and 4 of the Bowler application and read as follows:

Count 1

A prostanoic acid derivative which is 16-(3-chlorophenoxy)-9a, 11a, 15-trihydroxy-17, 18, 19, 20-tetranor-5-cis-13-trans-prostadienoic acid.

Count 2

A prostanoic acid derivative which is 9a, 11a, 15-trihydroxy-16-(3-trifluoromethylphenoxy)-17, 18, 19, 20-tetranor-5-cis-3-trans-prostadionic acid.

Both parties filed briefs and appeared, through counsel, at final hearing for oral argument.

[1] While this action was *sub judice*, the parties briefed and argued an appeal by Park Electrochemical from a discovery ruling by by Magistrate John L. Caden. In view of the result on this motion, the Court finds that that dispute is now moot.

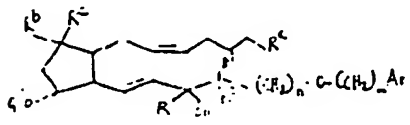
Background — Previous Interference

The parties Nelson and Bowler were involved in a previous interference (Interference No. 98,926). In the previous interference Nelson was awarded priority of invention as to counts 1, 2 and 4. Priority as to Count 3, directed to a method of achieving luteolysis, was awarded to Bowler, and Bowler's application No. 474,608 involved in Interference No. 98,926 issued as Patent No. 4,321,275, containing four claims directed to a method of inducing luteolysis by administering certain prostanoic acid derivative compounds.[1]

Count 2 of the previous interference reads as follows:

Count 2

A prostanoic acid derivative of the formula:



wherein R^a is carboxy or alkoxycarbonyl of up to 11 carbon atoms; R^b is hydroxy or alkanoyloxy of 1 to 4 carbon atoms; R^c is hydrogen; Ar is phenyl; 3, 4-dimenthoxyphenyl; 3, 4-methylenedioxy-phenyl; 3,4, 5-trimethoxyphenyl; or naphthyl or monosubstituted phenyl wherein said substituent is halo, trifluoromethyl, phenyl, liower alkyl, lower alkoxy; wherein R is hydrogen or lower alkyl; wherein R^1 and R^2 are hydrogen or lower akkyl; n and m are each integers from 0 to 3 with the proviso that the sum of n and m does not exceed 3; and Q' is hydrogen or p-biphenylcarbonyl

Counts 1 and 2 of the instant interfer :nce are encompassed within the scope of count 2 of the previous interference. The counts of the instant interference are encompassed when R^b is hydroxy, Q' is hydrogen, R^a is carboxy, R, R^1 and R^2 and hydrogen, n and m are O, and Ar is monosubstituted phenyl. In instant count 1, Ar is 3-chlorophenyl, and in instant count 2, Ar is 3-trifluoromethylphenyl. The specification of Nelson's involved patent in the instant interference is identical to the specification of Nelson's involved application in the previous interference. Bowler's involved applications in both interferences also have identical specifications.

Motions Deferred to Final Hearing

During the motion period, Nelson moved for benefit of the May 10, 1972 filing date of his parent application, Serial No. 252,030, which was involved in the previous interference. The motion was granted by the primary examiner in his Decision on Motions (Paper No. 27) in which he stated:

> In the Examiner's view, the parent application supports the species of Nelson's claims 5 and 4 corresponding to counts 1 and 2.

Nelson also moved to dissolve the instant interference on the ground that Bowler's involved claims are unpatentable to Bowler due to interference estoppel or prior art under 35 USC 102(g) because of the award of priority of counts 1 and 2 to Nelson in previous interference 98,926. This motion was deferred to final hearing.

Bowler moved for the benefit of British application No. 396/72, filed January 5, 1972. The motion was unopposed and was granted by the primary examiner in his Decision on Motions (Paper No. 27).

Bowler also moved to dissolve the instant interference on the ground that Nelson had no right to make his involved claims 4 and 5. This motion was deferred to final hearing by the patent interference examiner pursuant to 37 CFR 1.231(d) since the issue of right to make was determined to be ancillary to priority and was raised against a patentee (Paper No. 23).

Neither party presented any testimony. On Nelson's motion the interference was set for final hearing to decide the issues raised in the motions deferred to final hearing. As Nelson noted in his brief, resolution of the deferred motions is believed to be dispositive of the priority issue.

Issues

(1) Is there support in Nelson's parent and involved application for the species claimed in Nelson's involved patent claims 4 and 5?

(2) If the answer to (1) is yes, is Bowler therefore estopped to contest priority as to counts 1 and 2 in view of the award of

[1] Claims 2 and 3 of Patent No. 4,321,275 recite the use of :he compounds of the involved counts of this interference.

priority to Nelson in the previous interference.

Decision

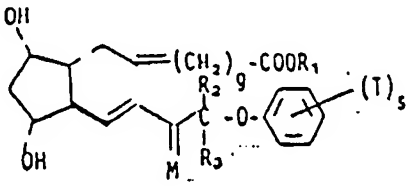
We hold that Nelson has support pursuant to 35 USC 112, i.e., written description and enablement, in his parent and involved applications for the species claimed in Nelson's involved patent claims 4 and 5. We further hold that Bowler is estopped on the ground of interference estoppel from contesting priority as to involved counts 1 and 2.

I.

Bowler does not contend in his brief that the Nelson disclosure is nonenabling for the compounds of the counts at issue. On page 8 of his brief, Bowler concedes "It is not a question of whether or not one could prepare these compounds, *once disclosed*, on the basis of the Nelson disclosure". Rather, it is Bowler's position that the Nelson disclosure does not meet the written description requirement of 35 USC 112. Bowler urges that the compounds of counts 1 and 2 are nowhere disclosed in the specification or original claims of Nelson's involved and parent applications.

We disagree with Bowler's contention that the Nelson disclosure does not meet the written description requirement of 35 USC 112 for the two compounds at issue. It is not necessary that the claimed subject matter be described in *ipsis verbis* to satisfy the written description requirement of 35 USC 112. *Fields v. Conover*, 443 F.2d 1386, 170 USPQ 276 (CCPA 1971) and *In re Lukach*, 440 F.2d 1263, 169 USPQ 795 (CCPA 1971). Further, in the instant case where the claims involved are drawn to specific compounds, it is well settled that it is not necessary for a party to expressly name the compounds to comply with the written description requirement. *In re Ruschig*, 379 F.2d 990, 154 USPQ 118 (CCPA 1967). The issue is whether the Nelson specifications convey clearly to those skilled in the art that Nelson invented the compounds at issue. We believe, as did the primary examiner who allowed the involved Nelson patent containing specific claims to the compounds at issue and who granted the Nelson motion for benefit of the parent application No. 252,030 as to Counts 1 and 2, that the Nelson specifications convey that message.

The Nelson specifications disclose that the purpose of the invention is "to provide novel 16-phenoxy and 16 - (substituted phenoxy) prostaglandin analogs" (column 7, lines 3-8) [2], including compounds of the formula XIV:



(Column 7, lines 63-68)

This subgenus includes the specific compounds of the counts where g is 3; M is H OH; R_1, R_2 and R_3 are hydrogen; s is 1 and T is either m-chloro for Count 1 or m-trifluoromethyl for Count 2.

Nelson discloses in Example 5 (col. 33), as a specific example, and shows the preparation of, a compound of formula XIV wherein g is 3; M is H OH; R_1, R_2 and R_3 are hydrogen and s is O. The only difference between the compound of Example 5 and the compounds of the counts is the presence of a substituent moiety on the unsubstituted phenoxy group. In particular, for Count 1 a chloro moiety is present in the meta position and for Count 2 a trifluoromethyl moiety is present in the meta position on the phenoxy group. However, the purpose of the Nelson invention, as noted supra, is to provide novel 16-phenoxy and 16-(*substituted phenoxy*) compounds. Further, Nelson specifically identifies suitable substituents (T) and specifically names m-chloro (col. 11, line 2) and m-trifluoromethyl (col. 11, line 7). As noted by the primary examiner in his Decision on Motions, the skilled worker following the Nelson disclosure need only replace the phenoxy substituent of example 5 with either an m-chlorophenoxy or a 3-trifluoro-methylphenoxy substituent and follow the particular reaction scheme of the example to obtain the compounds of the counts. Thus, the compounds of the counts could be made by replacing the phenoxyacetyl chloride of example 1 with the corresponding aliphatic acid ester to obtain the appropriately substituted phosphonate as taught by Nelson (beginning at col. 30, line 4). The precise aliphatic acids necessary to prepare the phosphonate required for the compounds of Counts 1 and 2 are described by Nelson at column 20, lines

[2] The reference is to the specification of Nelson's involved patent 4,303,796.